

The Lived Experiences of College Students Navigating Technostress Through AI Learning Tools

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ABSTRACT

This qualitative phenomenological study explored the experience of college students in navigating technostress while using AI learning tools in higher education. Through purposive sampling, 10 undergraduate students who use AI tools such as ChatGPT or AI-integrated learning management systems for at least one month were invited to participate in semi-structured interviews. Thematic analysis yielded nine themes across four dimensions: affective, behavioral, cognitive and ethical reflecting students' emotional strain, patterns of reliance, metacognitive regulation and academic integrity concerns. Findings showed that unclear institutional policies and inconsistent faculty expectations intensify technostress while students cope through peer support, self-imposed digital boundaries and critical verification of AI-generated outputs. Participants articulated tensions between efficiency and originality. The study emphasizes the need for culturally grounded AI literacy, clearer guidelines on responsible AI use, and supportive learning environments that foster critical thinking, academic integrity and sustainable technology practices in line with quality and well-being goals in higher education.

Keywords: Technostress, AI learning tools, Academic integrity, Student well-being, Quality higher education

INTRODUCTION

Digital learning becomes a vital part of society, as its rapid advancement transforms various fields of education (Zhang & Aslan, 2021). Artificial intelligence (AI) offers diverse capabilities to support students' learning and development, providing transformative and personalized outcomes. These adapt to the specific needs of academic learning (Chen et al., 2020; Holmes et al., 2022, as cited in Vieriu and Petrea, 2025; Hennekeuser et al., 2024). Consequently, higher education must define the role and limitations of AI learning tools (Holmes & Tuomi, 2022).

The development of artificial intelligence (AI) learning tools is specifically significant for supporting self-regulated learning, problem-solving, and feedback, helping students to adjust to their cognitive needs and encourage active participation (Azevedo & Aleven, 2013; Kasneci et al., 2023). Despite these risks, it has proven beneficial in reducing cognitive load, streamlining information access to students, and improving productivity (Chan and Hu, 2023; Idroes et al., 2023; Malik et al., 2023; Zhou et al., 2024).

In higher education, digital technology is central to academic work, as online learning platforms and AI learning tools ease the submission of assignments, access to course materials, and preparation for examinations. Although these technologies are designed for efficiency, this adds to the complexity of the learners' work, which demands continuous adjustment and can become a psychological burden (Tarafdar et al., 2015). Such a state is characterized by exhaustion, overwork, and anger. Technostress refers to the negative impacts of technological demands, such as exhaustion, overwork, and anger, which reduces learners' attention and motivation. (Brod et al., 1984 as cited in Salazar-Concha et al., 2021). This technostress features prominently in the literature on online and hybrid learning (Upadhyaya & Vrinda, 2021).

Moreover, most research concentrates on general digital tools, like learning management systems, and thus leaves a large gap in newer, adaptive technologies. As AI is integrated into academic life, the aspects of students' technostress caused by AI-based learning are largely neglected (Kasneci et al., 2023).

To address these gaps, this study investigates technostress from the experience of college students when utilizing AI learning tools. Despite the rapid adoption of the university, this remains under-researched in the Philippines. This research also encourages students to be responsible users of AI learning tools (Southworth et al., 2023).

Specifically, this study responds to the recommendation of Pilapil et al. (2024), emphasizing the navigation of self-doubt, which is an outcome of techno-complexity. It compares the efficiency of AI-generated content and how prolonged use contributes to technostress, forming an academic burden on cognition and affection.

LITERATURE REVIEW

Artificial intelligence is defined as a computer system or software that can carry out tasks challenging human intelligence, such as learning, reasoning, and problem-solving. In the context of education, these systems are adaptive tools used to evaluate large datasets of students and provide learning content tailored to students' needs and skill levels. It implies a combination of tools such as adaptive learning platforms, assessment systems, and virtual assistants. It helps both students and teachers in the educational process (Luckin et al., 2016; Holmes et al., 2019, as cited in Al Nabhani et al., 2025). AI, acting as a driver of personalized learning, tries to foster intellectual growth and make administrative tasks more manageable in higher education.

Research shows that combining the cognitive and affective aspects in AI learning environments is a key factor in achieving better educational outcomes. Effective computing technologies have enabled intelligent tutoring systems to detect and respond to learners, including confusion, stress, frustration, and anxiety. It is perceived as being sensitive to learning environments and can adjust pedagogical strategies in real-time (Gutierrez, 2025). The effective usage of AI depends on the "pedagogical agility" of the tool and its capacity to respond to individual frustration by changing the learning approach (Yang & Causon, 2022).

Notwithstanding, researchers recommended that students' reliance on AI systems might put them in a paradoxical situation where their cognitive load is increased. Their intrinsic motivation stems from limited opportunities to develop independent coping strategies among college students, integrated with an elevated level of academic stress related to AI usage.

Technostress, a term coined by clinical psychologist Craig Brod in the early 1980s, refers to a form of psychological or mental stress characterized by negative impacts on students' attitudes, ideas, behaviors, and mental health that are shaped by technology (Chukwuere & Chukwuere, 2025). Brod (1984), as cited in Salazar-Concha et al. (2021), was the first individual to raise this idea. He noted that technostress is the challenge of coming to terms with new computer technologies in a manner that is both psychologically healthy and adaptive. For many individuals, technostress is a reality that arises when they struggle to manage the demand for technology.

The phenomenon has changed over time. It started with "computer anxiety" in the 1980s and has now become experiences of information overload, digital exhaustion, and the pressures of being constantly connected (Cook et al., 2022).

Old-fashioned technostress theory identifies five primary areas that lead to technology-based stress: Techno-overload, Techno-invasion, Techno-complexity, Techno-insecurity, and Techno-uncertainty. These technostress dimensions have documented detrimental impacts on students' academic achievement and general mental wellness, manifesting as mental fatigue, anxiety, fear, reduced academic performance, and burnout. Research among Filipino students has confirmed these patterns, with studies finding technostress as a significant challenge in higher education institutions across the Philippines (De Guzman, 2024). Tarafdar (2020) and Bahamondes-Rosado et al. (2023) refer to technostress as the psychological strain on an individual's personality due to their adoption of technology use. It arises in the rapid pace of digital technologies.

Students can feel upset by technostress if they are digitally interrupted at times when expected to be always available. Previously mentioned studies suggested that technostress negatively affects mental ability and reduces overall satisfaction (Saleem et al., 2024; Vallone et al., 2023). Moreover, this may result in problems such as depression, conflict with concentration and attention, and low work performance (Salo et al., 2019).

Various institutions in the Philippines are integrating AI and smart technology to enhance engagement, accessibility, and administrative efficiency (Sulasula, 2023). Talili and Lucero Jr. (2025) argue that AI learning tools in academic fields have advantages and disadvantages from the perspectives of students and professors. While enhancing grammar and writing feedback can be beneficial, excessive reliance on content generation, critical thinking, and academic writing creativity can be problematic. It includes AI ethics, AI-generated writing plagiarism, and the lack of clear policies on artificial intelligence.

On the other hand, students from Davao del Norte College have used technology to enhance performance, motivation, and self-directed learning, as well as practical skill development. (Paja et al., 2020). It fosters positive experiences in classroom discussion and student engagement (Gopo, 2022). The findings of Pilapil et al. (2024) collectively emphasize the usage of AI tools in technology-integrated classrooms of BSED students of Kolehiyo ng Pantukan. It demonstrates learning efficiency and challenges such as overdependence, prompt creation conflicts, unstable internet connections, and misinformation.

While technology plays a significant role in student experiences, various researchers have named multiple sources of stress in higher education that interact with technology use. Academic pressures, which create assignment overload, short deadlines, fear of failure, and vague expectations. These are the main stressors that college students experience (Heckman et al., 2024). Moreover, studies have shown that various physical and social factors, such as instructional design, the availability of technical support, and institutional demands, contribute to students' stress caused by technology (Almaiah et al., 2020). This fact highlights the need for an analysis of technostress not only as a subjective stress reaction but also as an occurrence that is deeply rooted in educational settings.

From this, the results obtained from samples of Western populations might not be particularly useful for other cultures. As AI tools are being introduced into higher education worldwide, there is a need for research that is culturally, psychologically, and empirically grounded. The findings of these studies would be instrumental in the development of local teaching methods and the design of AI learning tools that consider the complex interplay of factors in student learning (Pacheco et al., 2025).

In order to fully understand how students navigate these technostressors, it is important to look beyond mere technological proficiency and examine their holistic interactions with AI. Ng et al. (2023) proposed the ABCE Model of AI Literacy, which conceptualizes user engagement across four distinct dimensions: Affective (attitudes and emotions), Behavioral (practical and collaborative use), Cognitive (critical evaluation and operational understanding), and Ethical (navigating academic integrity and moral use). While recent studies have utilized this model to assess educators' AI readiness (Bohari et al., 2024), there is a significant gap in applying the ABCE framework to understand how university students actively cope with and mitigate AI-induced technostress.

STATEMENT OF THE PROBLEM

The overall aim of this study is to explore the lived experiences of college students navigating technostress through AI learning tools.

Specifically, it looks to answer the following questions:

1. How do college students describe their experience of technostress while using AI learning tools?
2. In what ways do students navigate the tension between academic integrity and AI efficiency?
3. What are the primary sources of technostress in the AI learning experience?
4. What approaches do students use to reduce the level of technostress?

METHODOLOGY

Research Design

This study uses a qualitative phenomenological research design to investigate the experiences of college students who are dealing with technostress as they use AI learning tools. Phenomenology fits well with the study, as it centers on grasping how students go through a certain phenomenon and how they interpret that experience in their daily lives. Here, technostress is studied not as a quantifiable concept but as an experience that students have because of their interactions with AI-supported learning environments.

Participants and Sampling

Participants of the study were college students who are currently attending universities and are actively using AI learning tools (for instance, ChatGPT, AI-based writing assistants, and intelligent tutoring systems) in their academic work.

A purposive sampling method will be used to choose participants who can vividly and adequately describe the phenomenon. Participants will be required to fulfill the following criteria:

1. All respondents must be currently enrolled undergraduate student at a university
2. All respondents must have at least one (1) month use of AI learning tools (e.g., ChatGPT, Gemini, Perplexity, or AI-integrated LMS) for academic purposes; and
3. Age range must be twenty (20)-forty (40) years old.

The number of participants for this phenomenological study was determined by the principle of data saturation. The final sample consisted of 8 undergraduate students. During the interview and iterative analysis process, it became evident that by the eighth participant, informational redundancy had been reached, meaning no new themes, codes, or novel insights regarding technostress and AI usage were emerging. This sample size of 8 is well within the acceptable parameters for qualitative phenomenological research, which prioritizes analytical depth and the thick description of lived experiences over broad statistical generalizability.

Data Collection Method

Data was obtained through semi-structured, in-depth interviews. Through this method, the participants can explain in detail their experiences, with the interviewer guiding discussions such that the main themes: technostress, emotional distress, and coping strategies are consistently explored across interviews.

Interviews lasted for 30-45 minutes each and may take place either face-to-face or through any video conferencing platform, depending on the participants' preference. To capture accurate responses, audio recordings will be made with the participants' consent. During and right after the interviews, notes will be written to record non-verbal cues, initial thoughts, and account settings.

Data Analysis Procedure

The transcribed interview data were analyzed using a rigorous six-phase thematic analysis approach:

Phase 1: Familiarization - Researchers immersed themselves in the data by repeatedly reading the transcripts and extracting initial significant statements regarding AI-induced technostress.

Phase 2: Initial Coding - Data extracts were systematically coded across the entire dataset. Initial codes included concepts such as Deficit of AI Reliability, Cognitive Offloading, Digital Minimalism, and Technical Errors.

Phase 3: Generating Themes - Codes were collated into candidate themes, such as Technical Cognition, Socio-Academic Acceptance, and Metacognitive Regulation.

Phase 4: Quality Control (Reviewing Themes) - A two-level review process was conducted. Level 1 involved reviewing the coded extracts to ensure internal homogeneity, ensuring all quotes under a theme conveyed a unified message. Level 2 involved reviewing the entire dataset to establish external heterogeneity, ensuring clear, distinct boundaries between themes.

Phase 5: Defining and Naming Themes - Themes were refined, comprehensively defined, and anchored with key quotes from the participants to capture the essence of the lived experience.

Phase 6: Producing the Report - The final analysis wove together the analytic narrative, mapping the themes across four overarching dimensions: Affective, Behavioral, Cognitive, and Ethical.

A detailed audit trail of the coding process, from initial familiarization to theme generation is available in the supplementary materials (*Appendix E*) to ensure full methodological transparency.

Rigor and Trustworthiness

In order to ensure the academic rigor and trustworthiness of the research, several qualitative validation strategies were employed. Credibility was established through prolonged engagement with the participants during interviews and the implementation of peer debriefing. During peer debriefing, external academic experts were consulted to review and validate the interview questionnaire, the data analysis process, and the final thematic findings, mitigating researcher bias. Dependability was secured by maintaining a comprehensive audit trail, documenting every phase of the thematic analysis from initial familiarization to final theme definition. Confirmability was achieved through reflective journaling to separate the researchers' preconceptions from the participants' lived realities. Finally, transferability was supported by providing thick, detailed descriptions of the participants' experiences, allowing readers to assess the applicability of these findings to other higher education setting.

Ethical Considerations

Ethical approval for this study was formally sought and granted by Mapua University prior to any data collection. The participants were given an informed consent form that clearly stated the study's aims, possible risks, and their rights. Participants were informed that participation was voluntary, they could withdraw at any time without penalty, and their responses would be kept strictly confidential. Pseudonyms were used to hide participants' identities, and audio recordings were kept in a secure location accessible only to the researchers. As issues of stress and emotional experiences were discussed, participants had the option of not answering questions they found personally uncomfortable. Furthermore, in adherence to academic integrity and modern publication standards, the authors declare that while the subject of the study explores AI learning tools, no generative AI technologies were used in the conceptualization, analysis, or primary drafting of this manuscript's findings.

Data Management

Audio recordings will be transcribed exactly into the text. Before analysis, the transcripts will be checked for accuracy. All the information will be kept in secure digital files with passwords, and the transcripts will be cleaned of any personal details for privacy purposes.

Rigor and Trustworthiness

In order to make the research more reliable, the following methods will be used: credibility through prolonged engagement with the participants during interviews and follow-up probes; dependability through keeping a systematic record of the interview guides, transcripts, and decisions related to the analysis; confirmability through reflective journaling to separate the researcher's thoughts and biases from the study; and transferability through detailed descriptions of the participants' experiences and settings. Transferability: giving detailed descriptions of the participants' experiences and settings.

RESULTS

Through evaluation of the respondent's responses, nine (9) themes were identified through a thematic analysis. Each example demonstrates the experiences of college students navigating AI learning tools. This is shown in *Table 1*, which provides the description, its subcodes, and how it was extracted through the data collected in the interview.

Table 1. Thematic Map of Experienced Technostress Among College Students Using an AI Learning Tool (Berger & Luckmann, 1966)

Primary Codal Dimension	Theme	Description	Subcodes	Data Extract
1. Affective Dimension	1.1 Institutional and Policy Friction	It is the feeling of the student towards unclear policies about AI usage	Institutional Friction, Academic Burnout, Technical Frustration	"Nakakalow morale po since ano po ineexpect po ng mga prof is ano po AI na po lahat ng gawa po namin." (P1Q7)
	1.2 Psychological Dependence & Academic Identity	It addresses the emotional connection and cognitive reliance on AI and may alter a student's self-efficacy and intellectual identification.	Academic Anxiety, Behavioral Reliance, Cognitive Autonomy, Fluctuating Confidence, Inadequate Imposter Phenomenon, Self-Efficacy Growth, Demotivation	"Halong emosyon, minsan dahil nagkakaroon sila ng ibat ibang idea na nakukunan mula sa paggamit ng AI tools." (P8Q5)
2. Behavioral Dimension	2.1 Socio-Academic Acceptance	The effects of peer pressure and the normalization of AI in the classroom setting.	Social Normalization, Collaborative Inquiry	"Nagtatanong ako sa mga classmates ko... kung paano ba yung tamang paggawa ng prompt." (P7Q9)
	2.2 Cognitive Safeguarding and Digital Boundaries	It is an active defense mechanism on self-imposed protocols that have been established to preserve intellectual integrity, which acts as cognitive scaffolding and cognitive substitution.	Digital Safeguarding, Proactive Boundaries	"Mas focus po sa sarili, maglimit din po na gumamit ng socmeds kasi para po sakin the more na natututo ako gumamit ng AI, mas dumidepende na po ako sa mga easy ways gaya ng pagsagot ng mga activities." (P4Q10)
	2.3 Competence & Pedagogical Navigation	It serves as a navigation tool that provides learning concepts and independent research skills without a copy-	Cognitive Utility, Human in Workflow, Multimodal Traditional Resources	"I approach my girlfriend and ask her to teach me" (P2Q9).

		and-paste system.		
3. Cognitive Dimension	3.1 Metacognitive Regulation	The active regulation of the academic learning process through prompt engineering and cross-referencing.	Cognitive Refinement, Desirable Difficulty, Intellectual Priming	"Ano po nagsesearch po ako ng mas accurate na tanong kaya para mas mabigyan niya po ng accurate na sagot." (P1Q8)
	3.2 AI Reliability & Technical Trust	It is the critical evaluation of the AI efficiency that encompasses the verification of hallucinations and skepticism.	Reliability Deficit, Insufficient AI Literacy	"Imbes na mapadali yung pag-aaral ko, na-drain pa ako kakaintindi sa sagot niya. Hit and miss talaga siya, minsan nakakatulong, minsan mas nakakalito.." (P7Q1)
	3.3 Cognitive Offloading & Homogenization	The cognitive dependence on Artificial Intelligence that resulted in the loss of originality and a template-like output.	Cognitive Offloading, Academic Performance Gap	"I'm a little worried because what if we end up having the same answers." (P5Q6)
4. Ethical Dimension	4.1 Academic Integrity & Professional Conscience	It is a tension between personal integrity and academic pressure	Professional Conscience, Professional Integrity, Academic Transparency	"Para sa akin, considered cheating siya kapag puro copy-paste lang talaga yung ginawa mo... bawal na bawal puro copy-paste yung sagot niya for submission." (P7Q5)

The primary codal dimension was supported by Ng et al. (2023), who describe the ABCE Model as an AI literacy that extends far beyond technical proficiency; it encompasses affective, behavioral, cognitive, and ethical dimensions that collectively equip educators to critically evaluate, thoughtfully apply, and responsibly lead the integration of AI learning tools in diverse academic settings. Recent global research highlights significant disparities in AI literacy among educators, often influenced by discipline, experience, and access to professional development (Bohari et al., 2024; Zawacki-Richter et al., 2019).

To present the qualitative findings, four major codal dimensions are reported: affective, behavioral, cognitive, and ethical.

DISCUSSION

Code 1: Affective Dimension

The dimension encompasses educators' attitudes, interests, and self-efficacy related to AI. The Social Cognitive Theory (Bandura, 1986) and Self-Determination Theory (Deci & Ryan, 1985) emphasize the significance of intrinsic motivation and self-belief in promoting openness to technology adoption (Bohari et al., 2025). One respondent shared his perspective:

"Halong emosyon, minsan dahil nagkakaroon sila ng ibat ibang idea na nakukunan mula sa paggamit ng AI tools." (P8Q5)

This also reveals the emotional state of amazement and self-doubt, which focuses on the tension between intrinsic motivation and the respondent's openness to use an AI learning tool. This is closely related to the theme of Psychological Dependence and Academic Identity, which focuses on the experiences of technostress and the emotional and cognitive connection of students to AI usage. Reviews of recent studies also indicate that the education sector remains one of the most highly stressed fields. With the rapid evolution of AI learning tools, technostress has become an unavoidable issue in schools (Yang et al., 2025). Excessive use of digital devices and platforms leads to technostress, characterized by symptoms such as information overload, continuous availability, and digital fatigue (Ragu-Nathan et al., 2008, as cited in Abbas, 2023). Handayani and Sulastri (2022) noted that technostress is linked to the inability to utilize unfamiliar technologies, which, in turn, has a detrimental effect on the health and performance of users. Accordingly, students use a mixture of face-to-face and online learning modes to a greater extent and keep switching between these in the hybrid learning setting. This situation may lead to issues like fluctuations in motivation, technical glitches, and reduced interaction with peers and teachers.

The detrimental influence of technostress on the quality of online learning (QOL) in tertiary education is a matter of serious debate. It may cause disengagement, a decrease in mental processing capabilities, and an increase in anxiety and stress (Torales et al., 2022; Vallone et al., 2023), all of which may adversely affect the overall quality of online learning. Hence, universities and colleges need to address technostress and provide students with adequate support and tools to manage it effectively.

Their usage may also be in response to the professors' policies on the university, as one of the respondents' verbatim:

"Nakakalow morale po since ano po ineexpect po ng mga prof is ano po AI na po lahat ng gawa po namin." (P1Q7)

Another respondent added:

Strict ang prof namin na wag masyado dumepende sa AI pag sa individual report writing. Kaya ako malimit gumamit ng AI at nagbabasa talaga ng maraming sources at dun ko ieexplain ng mahaba. May ibang classmates ako na less rin gumamit ng AI pero marami pa rin na nagtatanong lagi sa AI. Nakakafrustrate lang nagcocomment si prof na galing raw sa AI yung ginawa kong essay kahit hindi naman. Dapat may gagamitin silang paraan para talaga masabi na galing ang gawa namin sa AI." (P6Q7)

These policies create technostress, which originally coined by clinical psychologist Craig Brod in 1984, who described trouble adapting to computer technology as the "modern disease" resulting from the failure to manage new computer technologies healthily. (Yadav, 2020). This is a common experience among college students, as cited in the study by Cook and Belle (2022). Technostress has been found to affect both academic productivity and performance among university students negatively. This highlights the detrimental effects of excessive reliance on Artificial Intelligence. The findings provide evidence-based support for policymakers in higher education.

When teachers implement strict policies, their ability to provide this crucial support diminishes, indirectly contributing to students' techno-overload and burnout, which negatively affects their academic learning. The study of Khlaif et al. (2024) highlights the crucial role of designing institutional policies that would enable the incorporation of AI learning tools such as Generative AI (Gen AI) in education. These policies are identified as a significant driver influencing how Gen AI is used in assessments by educators. This suggests that clear guidelines and frameworks from institutions are essential for guiding teachers in their adoption and application of these tools for student evaluation.

The presence of such policies drives the use of Gen AI in assessments. This implies that when institutions establish clear policies, teachers are more likely to adopt and incorporate AI learning tools for their assessment, creating an approach that is organized and systematic for their implementation.

Viewing these emotional responses through the lens of Brod's (1984) original technostress theory, the students are explicitly experiencing Techno-uncertainty and Techno-complexity. The institutional policy friction described by the participants acts as a catalyst for this stress, demonstrating that technostress in the AI era is not just about the software's difficulty, but the psychological burden of navigating shifting academic expectations.

Code 2: Behavioral Dimension

This dimension reflects active engagement, practical use, and collaborative learning with AI tools. He also highlighted that this aspect is demonstrated through practical classroom activities, which include experimentation with AI, collaborative prompt creation, and the negotiation of suitable usage norms with peers and educators (Bohari et al., 2025). It anchors the respondent verbatim:

"Nagtatanong ako sa mga classmates ko... kung paano ba yung tamang paggawa ng prompt" (P7Q9).

Another respondent mentioned:

"Nagtatanong ako sa classmates namin na magaling sa computer" (P6Q9)

These accounts show "Socio-Academic Acceptance," wherein AI use becomes normalized through peer modeling and group inquiry. Students alleviate technostress by distributing cognitive and emotional burdens across their social networks, with classmates functioning as informal "AI coaches," which aids in refining prompts, interpreting outputs, and resolving confusion. This aligns with the research of Sichterman et al. (2025), which indicated that AI learning tools can enhance social and cognitive engagement in well-structured environments. At the same time, the fact that not everyone in the class is equally AI literate suggests that behavioral coping is not evenly distributed and may lead to hidden patterns of dependence.

Another important theme under this dimension is "Cognitive Safeguarding and Digital Boundaries," which captures the active self-regulation strategies that students use to protect their intellectual freedom and manage technology overload. Another respondent elaborated:

"Mas focus po sa sarili, maglimit din po na gumamit ng socmeds kasi para po sakin the more na natututo ako gumamit ng AI, mas dumidepende na po ako sa mga easy ways gaya ng pagsagot ng mga activities." (P4Q10)

This account demonstrates that students do not simply follow AI's advice passively. Still, they also set limits on their screen time, avoid "easy way out" uses of AI, and use the tools mostly to clarify things instead of generating full solutions. These behavioral strategies are similar to the ways people deal with technostress that have been identified in recent studies (Kumar, 2024; Vallone et al., 2023). For example, individuals who are overloaded and dependent on technology can reduce their stress by breaking up their technology use, setting priorities, and consciously switching to offline activities (Kumar, 2024). Senayah's model of AI continuance intention suggests that technostress can reduce students' willingness to continue using AI. However, coping strategies supported by the institution can help students continue to use AI effectively without becoming burned out (Senayah et al., 2025). The current results have expanded this by showing that students themselves establish micro-policies, which are self-imposed regulations and limits that function as behavioral restraints to overreliance. The third theme, "Competence & Pedagogical Navigation," sees AI as a supporting learning tool. A respondent mentioned this theme:

"I approach my girlfriend and ask her to teach me" (P2Q9).

From this, AI is not meant to replace human instruction, but instead, it works in conjunction with traditional support, such as peers, partners, and multimodal resources (books, videos, lectures). Sichterman et al. (2025) elaborated on AI-supported peer learning, wherein AI feedback works best when used in group settings that encourage conversation and self-regulation, rather than replacing human interaction. In this study, the behavioral pattern that emerges is not just replacing human help with AI, but rather moving between AI tools, classmates, and significant others to lower technostress, gain clarification on some confusing outputs, and maintain a sense of control over learning. Others act only as an aid to the unclear information, as stated in this quote:

"Kumukuha lamang ako ng onting idea upang maging maayos ang aking sagot sa bawat alituntunin na aking gagawain" (P8Q10)

It only demonstrates that providing college students with approaches to choose from it fully helps their mental wellbeing.

Viewed through the lens of the ABCE Model of AI literacy (Ng et al., 2023), these coping mechanisms are not merely stress-reduction tactics; they are active demonstrations of the students' developing behavioral AI literacy. The model posits that behavioral literacy involves the practical, collaborative, and regulated use of AI. By establishing self-imposed digital boundaries, actively seeking peer coaching for prompt engineering, and deliberately integrating AI with traditional multimodal resources, these students are actively operationalizing the behavioral dimension. They are transitioning from passive, overwhelmed consumers of technology into strategic, regulated users who consciously design their own 'human-in-the-loop' workflows to mitigate technostress.

Code 3: Cognitive Dimension

The cognitive dimension reflects how students actively manage their thinking processes when using AI learning tools. It highlights how learners evaluate AI-generated responses, refine their questions, and balance between using technology and their own cognitive effort. Three themes emerged in this dimension: Metacognitive Regulation, AI Reliability and Technical Trust, and Cognitive Offloading and Homogenization.

The first theme, Metacognitive Regulation, shows how students consciously adjust their questions and strategies when interacting with AI tools. One participant explained:

"Ano po nagsesearch po ako ng mas accurate na tanong kaya para mas mabigyan niya po ng accurate na sagot." (P1Q8)

This indicates that students are not passively accepting AI responses but are actively refining their prompts to obtain clearer and more accurate information. Such behavior reflects metacognitive monitoring, where learners evaluate and regulate their learning strategies to improve understanding (Zimmerman, 2002). In AI-assisted learning environments, students must actively guide exchanges with AI systems and evaluate the outputs they receive, emphasizing the importance of critical engagement with AI-generated information (Kasneci et al., 2023).

The second theme, AI Reliability and Technical Trust, highlights students' awareness that AI-generated responses are not always dependable. One participant shared:

"Imbes na mapadali yung pag-aaral ko, na-drain pa ako kakahintindi sa sagot niya. Hit and miss talaga siya, minsan nakakatulong, minsan mas nakakalito." (P7Q1)

This illustrates how students critically evaluate the reliability of AI outputs rather than accepting them. The need to verify information may increase cognitive effort and contribute to technostress. Studies on generative AI in education emphasize that AI tools may contain inaccuracies or misleading information, making it necessary for students to verify responses through other sources and apply critical judgment when using these tools (Kasneci et al., 2023).

The third theme, Cognitive Offloading and Homogenization, reflects concerns about the overreliance on AI and its possible impact on originality. One respondent stated:

"I'm a little worried because what if we end up having the same answers?" (P5Q6)

This response highlights students' awareness that heavy dependence on AI may lead to similar outputs and reduced independent thinking. Cognitive offloading occurs when people rely on external technologies to do mental tasks, thereby reducing their cognitive effort (Risko and Gilbert, 2016). Although artificial intelligence can enhance learning efficiency, overdependence on it may hinder one's ability to think deeply, engage in the process, and be creative. Recent guidance on generative AI in education similarly warns that over-reliance on

AI-supported tools may weaken critical thinking and reduce meaningful human engagement in learning processes (UNESCO, 2023).

Overall, the cognitive dimension demonstrates that students navigate AI learning tools through active evaluation, strategic questioning, and critical judgment. Rather than relying on AI uncritically, they continuously negotiate how much cognitive responsibility should remain with the learner and how much can be supported by technology. These findings suggest that developing AI literacy and critical thinking skills is essential for students to manage technostress while maintaining meaningful learning engagement.

These findings strongly align with Social Cognitive Theory (Bandura, 1986). The students' active metacognitive regulation—refining prompts and verifying AI outputs which demonstrates high self-efficacy. They are not passive recipients of technology; rather, they are exercising human agency to modulate their cognitive load, actively resisting the 'cognitive offloading' that threatens their academic development.

Code 4: Ethical Dimension

The ethical dimension encompasses students' management of the conflict between academic integrity, professional ethics, and the efficiency offered by AI tools (Bohari et al., 2025). Based on Kohlberg's theories of moral development and digital citizenship, this means that students can figure out what "responsible" AI use looks like in real-life situations, not just by knowing the rules of the institution (Bohari et al., 2025). In the results obtained, this dimension is encapsulated in the theme "Academic Integrity & Professional Conscience," characterized as "a tension between personal integrity and academic pressure." One person who answered this question said it clearly:

"Para sa akin, considered cheating siya kapag puro copy-paste lang talaga yung ginawa mo... bawal na bawal puro copy-paste yung sagot niya for submission" (P7Q5).

From this, the students set their own moral limits on how to use AI: they can use it to help them understand something or to get a direct answer, which they explicitly consider cheating. This study by Tan et al. (2024) stated that GenAI does not ensure academic integrity. Instead, integrity depends on how students' intrinsic motivation, sense of competence, and moral values are affected by AI tools. When students take pride in their own work and see AI to get better, they are more likely to paraphrase, come up with new ideas, and ask for feedback instead of just copying without thinking. This is shown by another student's statement that evokes personal guilt: *"Nakakakonsensya siya... Iba pa rin kasi yung ikaw mismong nag-analyze" (P7Q4).*

Participants simultaneously articulate institutional and instructional dynamics that complicate this ethical position. Some professors do not expect students to use artificial intelligence at all, while others expect students to use AI to improve their work. This creates "Institutional and Policy Friction," which was already clear in the affective analysis (Balalle & Pannilage, 2025). Students report instances in which instructors falsely accuse them of utilizing AI or where the lack of definitive detection methods and explicit guidelines foster suspicion and a sense of injustice (Kofinas et al., 2025).

Recent evaluations of academic integrity in the digital era of artificial intelligence underscore how ambiguous or inconsistent policies can increase student anxiety, promote clandestine usage, which diverts attention from learning to avoid detection (Balalle & Pannilage, 2025; Kofinas et al., 2025). The current findings indicate that in the context of technostress, this policy ambiguity not only induces confusion but also compels students to deal with the dilemma of potential dishonesty versus the necessity of utilizing AI to manage heavy workloads (Balalle & Pannilage, 2025).

Ethical issues can also be related to overreliance and professional identity. Research from Tan et al. (2024) indicated that an overreliance on AI may impede deep learning, critical thinking, and domain-specific judgment, especially when students delegate fundamental cognitive tasks.

Abubakar et al. (2025) argued that institutional policies and ethical standards can mitigate the adverse effects of excessive reliance on AI by clearly delineating the appropriate circumstances and methods for AI utilization in

assessments. In this study, students' narratives reveal an evolving professional conscience: they express concern that habitual copy-paste practices will not only violate academic regulations but also diminish their proficiency as future professionals, especially in disciplines that require original analysis and communication. Their ethical reasoning incorporates both rule-based and consequence-based factors corresponding with deontological and consequentialist viewpoints in contemporary discussions on AI and academic integrity.

Ultimately, this ongoing negotiation of academic integrity exemplifies the *ethical dimension* of the ABCE model (Ng et al., 2023; Bohari et al., 2025). Ethical AI literacy requires more than just following institutional rules; it demands active digital citizenship and the moral evaluation of technology's impact on one's own learning. The students' feelings of guilt and their deliberate avoidance of 'copy-paste' practices indicate that the stress they experience is partly moral distress. They are actively wrestling with the ethical implications of cognitive automation. In the absence of cohesive institutional guidelines, these students are independently constructing an ethical framework for AI use—one that attempts to balance the undeniable efficiency of the tool with the preservation of their professional conscience and authentic intellectual development.

Limitations of the Study

While this study provides an in-depth exploration of technostress related to AI tools, several limitations must be acknowledged. First, the sample size of 10 participants, though reaching data saturation for the specific phenomenon studied, restricts the broad generalizability of the findings across disparate educational systems or cultural contexts. Second, the qualitative nature of the research relies on self-reported experiences, which may be subject to recall bias. Finally, the rapid evolution of artificial intelligence means that the specific technical limitations students currently experience may shift quickly. Future research should consider mixed-methods approaches across multiple universities to quantify the prevalence of the AI-induced technostress dimensions identified in this study.

CONCLUSION

This study explored the lived experiences of college students navigating technostress through the use of AI learning tools. The findings reveal that students' interactions with AI are not solely technological but are influenced by systematic processes of emotional, behavioral, cognitive, and ethical dimensions. These experiences demonstrate that the integration of AI in academic environments introduces students to opportunities and challenges that they must actively work with during their learning process.

The affective dimensions that students experience differently when using AI learning tools, such as curiosity, uncertainty, and pressure, are influenced by unclear institutional policies and expectations. These emotional tensions highlight how the rapid adoption of AI in education can generate technostress when students are averse to understanding the limitations of acceptable AI use. At the same time, the behavioral dimension illustrates that students develop practical coping strategies to manage these pressures. Rather than relying solely on AI, participants described collaborative learning with peers, setting personal limits on technology use, and integrating AI with traditional learning resources such as books, lectures, and discussions. These behaviors suggest that students actively construct a support system that combines technological and human resources to manage academic demands.

The cognitive dimension further reveals that students do not simply accept AI-generated outputs but instead engage in metacognitive regulation by refining prompts, verifying responses, and critically evaluating the reliability of AI-generated information. These findings suggest that the use of AI in education requires learners to exercise self-regulated learning and critical thinking skills to ensure meaningful engagement with the technology (Zimmerman, 2002).

However, participants are also concerned about the potential for overdependence on AI, particularly the risk of reduced originality and homogenized outputs. This reflects the process of cognitive offloading, where individuals delegate certain mental tasks to external technologies to increase efficiency (Risko & Gilbert, 2016). While such strategies can support learning, excessive dependence on AI may limit deeper cognitive engagement and creativity.

The ethical dimension highlights students' views on academic integrity and the ethical use of AI. Participants demonstrated a growing awareness of the ethical consequences of AI-assisted tools, particularly the importance of maintaining originality and avoiding direct copying of AI-generated responses. At the same time, the findings reveal that inconsistent institutional policies may create uncertainty regarding appropriate use, contributing to ethical dilemmas and increased technostress among students.

These findings indicate that technostress in AI learning environments is not merely the result of technological complexity but emerges from students' ongoing efforts to balance efficiency, autonomy, and ethical responsibility. Students continuously negotiate how AI should function in their learning process, whether as a tool for assistance, a source of information, or a potential shortcut that must be used with caution. These insights emphasize the importance of developing AI literacy. Clear policies and a supportive educational environment are essential for students to responsibly use AI tools without depriving them of the chance to think critically while upholding integrity. As AI technologies continue to evolve in higher education, fostering these competencies will be vital in ensuring that AI promotes learning instead of contributing to additional stress or dependency.

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Disclosure of interest

The authors report there are no competing interests to declare.

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APPENDICES

Appendix A

Informed Consent Form

Study Title: The Lived Experiences of College Students Navigating Technostress Through AI Learning Tools

I understand that the researchers, graduate students of Mapúa University pursuing a Master's Degree in Psychology and currently enrolled in Research Methods 2, are conducting a study entitled, **"The Lived Experiences of College Students Navigating Technostress Through AI Learning Tools."**

To assist the researchers in the preparation and completion of this study, I hereby voluntarily agree to be interviewed and to provide information in connection with the research, including my personal experiences, insights, remarks, and recollections related to the use of AI learning tools and technostress.

I understand that the interview may be audio-recorded for documentation and transcription purposes. I understand that these recordings will be used solely for academic research purposes and will be kept strictly confidential. Furthermore, I am aware that the recordings will be securely stored and destroyed upon completion of the study.

I understand that my participation is entirely voluntary and that I may refuse to answer any question or withdraw from the interview at any time without penalty.

I hereby grant the researchers permission to quote or paraphrase all or any portion of the interview in their research paper, provided that all information will be treated with strict confidentiality and anonymity where necessary. Pseudonyms or codes will be used to protect my identity. I understand that no harm shall be inflicted upon me during the interview.

Agreed and confirmed:

Signature over Printed Name

Date

Appendix B

Interview Protocol/ Qualitative Data Collection Protocol

Qualitative Data Collection Protocol Title: The Lived Experiences of College Students Navigating Technostress Through AI Learning Tools Interview Protocol Researchers will use an interview guide to help the conversation; however, it will also allow them to ask probing and follow-up questions.

Interview Information

Interviewee: _____ Interviewer: _____

Date and Venue of Interview: _____ Duration: _____
Documents Obtained: _____

Post-Interview _____ Comments/Observations: _____

Introductory Protocol

Before we start, I want to tell you that I am planning to audio-record our interview session today. This is to help us with note-taking and to make sure we accurately transcribe our interview. I'll request that you to sign a consent and audio recording release form shortly. The recording will only be accessible to the research team and will be deleted after its purpose. The transcript will be kept confidential, and we will use a pseudonym to hide your identity.

You will be signing a separate informed consent form, which explains several key elements: participation in the study is completely voluntary, you are free to skip any question or even stop at any time, there are no known risks beyond the usual academic environment, and your academic performance will not be impacted in any way by your participation. The confidentiality of all information is guaranteed.

Our interview will last for about 30 to 45 minutes. Your experience with AI learning tools will be the topic of our discussion. If we start running short on time, I'll make sure that we get to the main points while I gently guide you. So, shall we start? Or do you want to ask me something first?

INTRODUCTION

Good day, Mr./Ms. _____. I appreciate your willingness to participate in this research. I am (Researcher Name), a graduate student at Mapua University pursuing a Master's Degree in Psychology. I am currently working on research entitled "The Lived Experiences of College Students Navigating Technostress Through AI Learning Tools."

You have been chosen as a respondent in this research because you are a college student who has utilized AI learning tools in your academic work. Your points of view and experiences will add great value to the understanding of how students like you manage the difficulties and advantages that AI tools bring.

This research paper is all about your actual experiences. It aims to find out how you describe and understand technostress when you use AI learning tools, how you maintain academic integrity while enjoying the efficiency that AI offers, what aspect of your AI learning experience is stressful to you, and what measures you take to either cope with or reduce that stress.

The purpose of this research is to evaluate or criticize your use of AI tools. On the contrary, I am seeking to discover your real experiences, thoughts, feelings, and the methods you use in your daily academic life. There are no right or wrong answers; I only want to hear your genuine view.

PART I: Interview Questions

RQ1: Experiencing Technostress

1. What event or moment do you remember the most when you felt stressed or overwhelmed while using AI learning tools?
2. How do you feel when technology makes you work faster or do more than you can handle?
3. How does your confidence change when you compare your work to what AI can do?

RQ2: Academic Integrity and AI Use

4. Have you felt guilty about using AI as a means of a shortcut?
5. Can using AI be considered academic dishonesty?

RQ3: Social Environment.

6. How would you feel if one of your classmates were using an AI learning tool?
7. How do your professor's attitudes and policies influence you in using AI on academic work?

RQ4: Coping strategies and stress management.

8. What strategies do you use to cope with or manage stress when you feel overwhelmed by AI tools?
9. How do you reach out to others when you are struggling with AI tools?
10. What personal rules or boundaries have you developed for how you use AI tools to protect your well-being?

Closing Protocol

Thank you very much for sharing your experiences with me today. Your reflections were valuable, and they will significantly help us have a better understanding of how students utilize AI learning tools and cope with technostress. Before we conclude, I would like to remind you that:

- All your answers will be confidential, and you will remain anonymous.
- You will be given the chance to see the transcript of this interview and make any changes or corrections.
- If, after today you feel there is something more you would like to add, do not hesitate to get in touch with researchers the research team if the interview discussion raised any concerns. Is there any question that you would like to ask me? Once again, thank you for your time.

APPENDIX C

APPROVAL LETTER

DATE

Dear Sir/Madam:

Greetings of Peace and goodwill!

In partial fulfillment of the requirements for the degree of Master of Arts in Psychology at Mapua University, the researchers are conducting a study entitled ***“The Lived Experiences of College Students Navigating Technostress Through AI Learning Tools”***.

Our research aims to explore the psychological impact and coping mechanisms of undergraduate students as they integrate Artificial Intelligence into their academic workflows. Given the reputation of your university in academic excellence, we believe your students would provide invaluable insights into this contemporary phenomenon.

In line with this, we humbly request your permission to conduct our data collection within your department. The study involves interviewing selected undergraduate students who meet the following criteria:

- i. All respondents must be currently enrolled undergraduate student at a university
- ii. All respondent must have at least one (1) month use of AI learning tools (e.g., ChatGPT, Gemini, Perplexity, or AI-integrated LMS) for academic purposes; and
- iii. Age range must be twenty (20)-forty (40) years old.

Rest assured that all gathered information will be treated with the utmost confidentiality and will be used solely for academic purposes. Attached are our research questions and informed consent form for your review.

We look forward to your favorable response regarding this request. Should you have any questions or require further documentation, please feel free to contact us at 0966-445-7705.

Thank you very much for your favorable action on this matter. Your positive response would be highly appreciated.

Respectfully yours,

Mr. Marlo Rey D. Dela Liana

Researcher, Mapua University

Mr. Dal Valdemar J Caringal

Lead Researcher, Mapua University

Ms. Joanne Stefanie D. Bacunawa

Researcher, Mapua University

Ms. Rikxzel Josh D. Jimenez

Researcher, Mapua University

Noted by:

Dr Edward J. Quinto

Full Professor, Mapua University

Appendix D

Interview Questions (Tagalog Version)

RQ1: Karanasan sa Technostress (Experiencing Technostress)

1. Ano ang partikular na pangyayari o sandali na pinakatumatak sa iyo kung kailan ka nakaramdam ng stress o pagkapagod dahil sa paggamit ng AI learning tools?
2. Ano ang nararamdaman mo kapag napipilitan kang magtrabaho nang mas mabilis o gumawa ng higit pa sa iyong makakaya dahil sa teknolohiya?
3. Paano nagbabago ang iyong tiwala sa sarili (confidence) kapag ikinukumpara mo ang iyong sariling gawa sa kayang gawin ng AI?

RQ2: Akademikong Integridad at Paggamit ng AI (Academic Integrity and AI Use)

4. Nakaramdam ka na ba ng pagkabagabag o "guilt" sa paggamit ng AI bilang alternatibo sa iyong akademikong pagsusulat?
5. Maituturing ba ang paggamit ng AI bilang isang anyo ng pandaraya sa pag-aaral (academic dishonesty)?

RQ3: Sosyal na Kapaligiran (Social Environment)

6. Ano ang nararamdaman mo kapag nalaman mong ang isa sa iyong mga kaklase ay gumagamit ng AI learning tool?
7. Paano nakakaapekto sa iyo ang pananaw at mga polisiya ng iyong mga propesor sa paggamit mo ng AI sa iyong mga akademikong gawain?

RQ4: Mga Pamamaraan sa Pagharap at Pamamahala ng Stress (Coping Strategies and Stress Management)

8. Anong mga diskarte ang ginagawa mo upang makayanan o mapamahalaan ang stress kapag nalulula (overwhelmed) ka na sa mga AI tools?
9. Paano ka humihingi ng tulong sa iba kapag nahihirapan ka na sa paggamit ng mga AI tools?
10. Ano-ano ang mga personal na alituntunin o limitasyon na binuo mo upang mapangalagaan ang iyong sariling kapakanan?

Appendix E

Thematic Analysis Audit Trail (Supplementary Material)

Phase 1: Familiarization

Question Numbers	Participation ID	Data Extract
	P1	Nagsesearch po ako tapos yung mga info na binibigay niya is mali po.

1. Anong pangyayari o 287sandali na pinakaaalala mo na nakaramdam ka ng stress o pagkapagod sa paggamit ng AI learning tools?	P2	There were times when AI couldn't give me the answers that I really needed. That made me feel a bit stressed because I was expecting it to help, but it didn't provide the exact information I was looking for.
	P3	The clearest memory I have was the very first time I used AI. Before that, I was really scared to use it because some instructors have AI detectors, and of course, I didn't want to get involved if they were checking.
	P4	Kapag hindi po naibibigay yung expected na sagot sa tanong ko.
	P5	I remember when I was in my first year in college. AI was still new to me at that time, and I didn't really know how to use it properly yet.
	P6	Nakaramdam ako ng pagkagulo sa paggamit ng AI yung time na pag naglalagay ako ng prompt at iba iba ang sagot na binibigay na madalas walang connect sa tanong ko. Ganun din pag hindi ko naiintindihan yung mga sagot na binabato ng AI, kahit maglagay ako ng follow-up na information, at parang hindi nagegets ni AI ang ibig ko sabihin at para bang paikot ikot ang usapan namin, dun ako nakakaramdam ng stress.
	P7	Frustrated minsan ng feeling ko. Nag-ask ako sa AI na iexplain yung simple terms in Anatomy and Physiology exam namin. Tapos biglang nagbigay ng sobrang lalim na medical jargon na pang-doctor na yata. Imbes na mapadali yung pag-aaral ko, na-drain pa ako kakaintindi sa sagot niya. Hit and miss talaga siya, minsan nakakatulong, minsan mas nakakalito.
	P8	Pangangamaba sa paggamit ng AI tools at pagiging dependent.
2. Ano ang nararamdaman mo kapag mas mabilis o higit pang nakakagawa ka sa iyong makakaya dahil sa teknolohiya?	P1	Natutuwa sir dahil napapabilis po niya yung trabaho ko, mas nagiging productive po ako.
	P2	I feel thankful because it helps me finish my tasks faster. I'm able to accomplish more work in a shorter amount of time.
	P3	Honestly, it's satisfying. Before, it was just support, but now I'm a bit more reliant on it, especially for generating ideas.
	P4	Tumataas yung self confidence ko dahil kaya ko naman pala sumagot base on my own knowledge.
	P5	I feel happy because I don't spend too much time searching anymore. Because of AI, I can finish researching my lessons more quickly.
	P6	Nakakafrustrate madalas yung feeling ko kapag mas mabilis pa gumawa sa akin ang AI tools. Nagegets ko naman na ginagamit sila para makatulong sa 287 ntens pero nakakafrustrate yung feeling 287ntens alam na alam mo yung subject at marami ka nashashare dun tapos parang normal lang yung pag tinanong mo sa AI.

	P7	May guilt at anxious yung feeling ko. Oo, ang bilis matapos nung mga minor output or pag-summarize ng notes, pero naiisip ko agad: "Paano pag nasa duty na ako for RLE (Related Learning Experience) next year?" Hindi ko naman pwede i-chat sa AI kung anong gagawin kapag bumabagsak na yung BP ng pasyente, diba? Nakaka-anxious kasi feeling ko faking it ako kapag masyado akong umaasa sa AI para bumilis ang trabaho.
	P8	Para sa akin nakakaamaze kasi may mga idea na wala sa kaalaman ko ay nalalaman ko ng maayos at naiintindihan.
3. Paano nababago ang iyong tiwala sa sarili (confidence) kapag ikukumpara mo ang iyong sariling gawa sa kayang gawin ng AI?	P1	Bumaba po ang aking confidence kasi kahit simple words sine-search ko pa po.
	P2	I am confident. Because for all the work that I do, I know it is correct. I'm not afraid of making mistakes since I check my work carefully.
	P3	Yes, it boosts my confidence. But I'm not a hardcore AI user because I'm still scared of getting caught. There's still my personal touch in my work it's not fully AI.
	P4	Minsan po, when I am not knowledgeable enough dahil halos madalas din po ako gumagamit ng AI since napapadali gawin yung mga assignments na meron po ako.
	P5	I'm more confident because I feel like most of the answers it gives me are correct.
	P6	Kapag gumagamit ako ng AI, madalas ay lagi ako nagkakaroon ng doubt o agam-agam sa mga alam ko. Para bang need ko lagi ivalidate ang alam ko o lagi magiging sagot ko usapan sa AI para maging tama yung sasabihin ko. Kapag may gawain na alam na alam ko yung topic kasi nag-aral Talaga ako nun, pero nababawasan confidence ko about sa topic na yun kasi need ko pa isure kay AI.
	P7	Nakakababa minsan ng self-esteem. Nag-aral naman ako nang mabuti, binasa ko yung tamang textbook namin. Pero pag nakita ko yung sagot ng AI na sobrang perfect at well-organized, feeling ko ang pangit ng gawa ko.
	P8	Minsan sa sarili kong gawa ay nagkakaroon ako ng self-doubt na baka may katulad akong sagot.
4. Nakaramdam ka na ba ng pagkabagabag sa paggamit ng AI bilang alternatibo sa iyong akademikong pagsusulat?	P1	Opo sir, kinakabahan po ko baka madetect ng AI check kahit binago ko na ang wording.
	P2	Not really. Because I usually use AI just to get ideas. I don't copy and paste everything. I study the details one by one and make sure I understand them.
	P3	Of course, there are times. Especially in long readings in MedTech. I really need AI's help to understand things faster because if I rely only on the

		book, the explanations are very long. I use AI to summarize them.
	P4	Opo kasi nagiging dependent ako sa AI imbes na magrebiww ako on my own.
	P5	Honestly, yes. Because I know that because of AI, I sometimes become lazy in studying.
	P6	Pwede support ang AI sa pagsusulat lalo na kung gagawa ka ng novel or poem or content sa social media, pero hindi dapat maging dependent dun pag gagawa ng academic writing. Iba pa rin ang academic writing kasi galing yun sa iba't ibang sources at need na may human touch yun kasi may isosolve kang totoong problema parang sa research paper, kaya medyo bothered ako kung puro AI ang gagamitin pag academic writing.
	P7	Oo, lalo na kapag nagta-try kaming gumawa ng mga Nursing Care Plans (NCP). May iba akong classmates na puro "generate" na lang, pero nakakakonsensya siya for me. hindi dapat siya yung gagawa ng buong plan. Iba pa rin kasi yung ikaw mismong nag-analyze ng case ng pasyente.
	P8	Oo, dahil minsan malayo na ang sagot na lumalabas dito at hindi na konektado sa tanong.
5. Maituturing ba ang paggamit ng AI bilang isang anyo ng pandaraya (academic dishonesty)?	P1	Yes po sir, since ito po ay minsan nadedetermine as pandaraya since gumagamit po ako ng AI ng patago.
	P2	No. Because I only use it to get ideas or to better understand what I am doing.
	P3	Yes, because like I said, it can spoon-feed everything and make things too easy. Based on my experience, I don't dig deep anymore. It's just one click, and everything is there. But just to share, we have a professor who encourages us to use AI so we won't struggle too much with long explanations in books as long as the sources are relevant.
	P4	Opo, dahil okay lang po sana kung idea lang ang kukunin pero madala inaasa na lang sa AI ung paggawa ng assignments and quizzes.
	P5	Yes, because with just one click, you can easily know the answer.
	P6	Oo, tingin ko ay parang shortcut gumamit ng AI lalo na sa academic writing. Kailangan talaga na ikaw mismo magbasa ng iba't ibang sources at gumamit na malalim na pagiisip. Kaya pag gagamit ng AI, mas maganda na sabihin sa prof na gumamit ka like example ay Grammarly para maging honest ka talaga sa gawa mo.
	P7	Para sa akin, considered cheating siya kapag puro copy-paste lang talaga yung ginawa mo tapos ipapasa mo as your own. Pero kung ginamit mo lang siyang parang tutor para magpa-quiz sa sarili mo ng mga terms sa Anaphy. Hindi naman yun pandaraya. Sa huli, nasa intensyon at paraan ng

		paggamit yan.
	P8	Depende sa pamamaraan at paggamit nito.

Question Numbers	Participation ID	Data Extract
6. Ano ang nararamdaman mo kapag nalaman mong ang isa sa iyong mga kaklase ay gumagamit ng AI learning tool?	P1	"Normal po sir lahat naman po tayo gumagamit ng AI learning tool kahit mga prof."
	P2	It's okay with me because I also use AI learning tools.
	P3	For me, it's okay. I don't mind because I also use it. It's your own thing.
	P4	Normal lang po dahil nanonormalize na rin naman po sa mga kabataan na gumamit ng AI.
	P5	I'm a little worried because what if we end up having the same answers.
	P6	Nakakaramdam ako ng inis kasi nafeel ko unfair na gumamit sya ng AI para matapos lang agad niya yung report o essay. Hindi mo masasabi na talagang naiintindihan yung lesson kung lahat na lang itatanong sa AI.
	P7	Nakaka-frustrate minsan kasi feeling ko ang unfair. Ako nagpupuyat intindihin yung lesson tapos sila tapos na in ten minutes. Pero kung iisipin talaga, pwede ka mag-AI sa essay, pero sa real life, ikaw at yung pasyente lang. Kaya lowkey nag-aalala rin ako for them.
	P8	Halong emosyon, minsan dahil nagkakaroon sila ng ibat ibang idea na nakukunan mula sa paggamit ng AI tools.
7. Paano nakakaapekto sa iyo ang pananaw at mga polisiya ng iyong mga propesor sa paggamit mo ng AI sa iyong mga akademikong gawain?	P1	" Nakakalow morale po since ano po ineexpect po ng mga prof is ano po AI na po lahat ng gawa po namin."
	P2	They influence us to use AI only for ideas and not to depend on it completely.
	P3	As I mentioned earlier, some professors encourage us to use AI because it's useful if used properly. But there are also professors who really don't allow it. So it really depends.
	P4	Malaki rin po ung impact nito sakín kasi kahit sariling sagot ko na yung ginagamit ko may mga doubts pa rin ung mga professor
	P5	I learned that I should not rely on AI for everything and that I should be careful when using it.
	P6	Strict ang prof namin na wag masyado dumepende sa AI pag sa individual report writing. Kaya ako malimit gumamit ng AI at nagbabasa talaga ng maraming sources at dun ko ieexplain ng mahaba. May ibang

		classmates ako na less rin gumamit ng AI pero marami pa rin na nagtatanong lagi sa AI. Nakakafrustrate lang nagcocomment si prof na galing raw sa AI yung ginawa kong essay kahit hindi naman. Dapat may gagamitin silang paraan para talaga masabi na galing ang gawa namin sa AI.
	P7	Sobrang strict ng mga Clinical Instructors (CI) at Professors namin sa AI. Kaya mas nakakakaba. Super careful talaga ako. As in, manual basa talaga sa library. Nakaka-pressure lang kasi minsan, kahit sariling dugo't pawis yung ginawa mo, natatakot ka pa rin na baka ma tag na red flag AI detector nila yung gawa mo kasi minsan pumapalpak din yung mga detectors na yun.
	P8	Minsan ay nagsasabi ang aming mga guro na lahat ng sagot namin au nanggagaling sa AI tools.
8. Anong mga pamamaraan ang ginagamit mo para maiwasan ang stress sa mga AI tools?	P1	"Nagsesearch po ng mga mas accurate na maiintindihan po ni AI"
	P2	I do research on how to use AI properly so I can understand it better and avoid feeling overwhelmed.
	P3	As I mentioned earlier, some professors encourage us to use AI because it's useful if used properly. But there are also professors who really don't allow it. So it really depends.
	P4	Mas dinadalasan ko na po ang pagrereview imbis na mag open po ako ng AI tools. In this way po na nalelessen po yung stress ko and mas nadadagdagan po yung knowledge ko.
	P5	I disconnect from the internet when I start to feel stressed because of AI.
	P6	Nagbabasa ako ng maraming sources like sa internet or e-books or books galing sa library namin kung meron. Naguninstall rin ako ng AI apps at nagsesearch talaga ako sa google search engine. Iniisip ko na lang na kaya ko naman sagutin ang mga tanong sa klase basta magbasa lang ako at aralin ang lesson ng maayos
	P7	Para iwas stress, bumabalik ako sa basics kapag naguguluhan na ako. Nagbabasa ako ng physical textbooks, gumagawa ng sarili kong reviewer gamit ang index cards at nanonood ng mga lectures sa YouTube na recommend ng mga prof na mas madaling intindihin.
	P8	Minsan ay nagbabasa na lang ako ng libro at doon na lamang kumukha ng ideay at maaring isagot
9. Paano ka humihingi ng tulong sa iba kapag nahihirapan ka sa paggamit ng mga AI tools?	P1	"Ano po nagsesearch po ako ng mas accurate na tanong kaya para mas mabigyan niya po ng accurate na sagot."
	P2	I approach my girlfriend and ask her to teach me how to use AI properly.
	P3	No, I don't reach out. Whatever trends about AI come out, they're not that interesting to me.
	P4	Madali lang naman po gumamit ng AI tools kaya

		hindi na rin po ako nagtatanong sa iba.
	P5	No, I usually don't reach out to others. I prefer to search on my own, like using Google or YouTube.
	P6	Nagtatanong ako sa classmates namin na magaling sa computer o sa English kasi nahihirapan ako magtanong ng tamang prompt sa AI
	P7	Nagtatanong ako sa mga classmates ko magaling sa technology kung paano ba yung tamang paggawa ng prompt. Sinasabi ko sa kanila, "Uy, paano ko ba sasabihin kay AI na i-quiz lang ako sa nervous system". Para at least, natutulungan nila akong gamitin yung AI for practice para sa exam.
	P8	Kapag may mga malallim na salita at hindi ko gusto ang lumalabas o kinalabasan ng paggamit ko ng AI.
10. Ano-ano ang mga personal na alituntunin o limitasyon na binuo mo upang mapangalagaan ang iyong sariling kapakanan?	P1	"Huwag po magbibigay ng personal information and gamitin lang po ang AI for college purposes."
	P2	I don't put my personal details into AI tools to protect my privacy.
	P3	I only use AI when I really need it, like for narrative reports. I don't go beyond that or explore too much. I also make sure that my own ideas are still there. I don't want AI to take over my work.
	P4	Mas focus po sa sarili, maglimit din po na gumamit ng socmeds kasi para po sakin the more na natututo ako gumamit ng AI, mas dumidependen na po ako sa mga easy ways gaya ng pagsagot ng mga activities.
	P5	I don't use AI for all of my schoolwork. I only use it when it is really urgent.
	P6	- Bihira gamitin ang AI tools, like kung kaya naman makita ang impormasyon sa libro o sa articles sa internet o e-books ay yun na lang gamitin. Kahit madalas nakakatempt gumamit para matapos agad ang assignment pero hindi mo rin sure kung tama rin talaga lahat nakalagay dun kaya mas mabuti ay ako na lang mismo gagawa ng school work ko.
	P7	Pwede ko siyang tanungin para i-explain yung mahihirap na concepts sa science subjects, pero bawal na bawal puro copy-paste yung sagot niya for submission. Okay na sa akin na di ganun mataas na grade pero may natutunan talaga ako na magagamit ko pagkagraduate.
	P8	Kumukuha lamanag ako ng onting idea upang maging maayos ang aking sagot sa bawat alituntunin na aking gagawain.

Phase 2: Initial Coding

Ref. Code	Data Extract	Initial Code	Theme
P8Q4	"Oo, dahil minsan malayo na ang sagot	Deficit of AI Reliability	AI Reliability & Technical Trust
P8Q6	"Halong emosyon, minsan dahil	Intellectual Differential	AI Reliability & Technical Trust
P5Q7	"I learned that I should not rely on AI	Linguistic Decoding	AI Reliability & Technical Trust
P5Q8	"I disconnect from the internet"	Seeking Validation	AI Reliability & Technical Trust

P6Q9	"Nagtatanong ako sa classmates namin na magaling sa computer"	Technical Errors and Reliability Issues	AI Reliability & Technical Trust
P4Q7	"Kahit sariling sagot ko na yung	Trust Erosion	AI Reliability & Technical Trust
P8Q9	"Kapag may mga malallim na salita at	Trusting AI Efficiency	AI Reliability & Technical Trust
P1Q10	"Huwag po magbibigay ng personal	Data Privacy Protection	Cognitive Safeguarding and Digital
P6Q10	"Bihira gamitin... mas mabuti ay ako na	Desirable Difficulty	Cognitive Safeguarding and Digital
P4Q10	"Mas focus po sa sarili, maglimit din po	Digital Minimalism	Cognitive Safeguarding and Digital
P5Q10	"I only use it when it is really urgent."	Functional Necessity	Cognitive Safeguarding and Digital
P3Q10	"I only use AI when I really need it... my	Human in Workflow	Cognitive Safeguarding and Digital
P8Q10	"Kumukuha lamang ako ng onting idea	Selective Guidelines	Cognitive Safeguarding and Digital
P8Q8	"Minsan ay nagbabasa na lang ako ng	Source Reversion	Cognitive Safeguarding and Digital
P3Q5	"It can spoon-feed everything and	Cognitive Offloading	Cognitive Utility
P4Q5	"Inaasa na lang sa AI ung paggawa ng	Delegated Automation	Cognitive Utility
P5Q2	"I feel happy because I don't spend too	Effective Research Process	Cognitive Utility
P1Q2	"Natutuwa sir dahil napapabilis po niya	Enhanced Efficiency	Cognitive Utility
P2Q2	"I feel thankful because it helps me	Productivity Tools	Cognitive Utility
P4Q2	"Tumataas yung self confidence ko	Active Capacity	Competence & Pedagogical Navigation
P6Q2	"Nakakafrustrate madalas yung feeling	Analytical Synthesis	Competence & Pedagogical Navigation
P3Q3	"Yes, it boosts my confidence... I'm not	Authentication of Personal	Competence & Pedagogical Navigation
P5Q3	"I'm more confident because I feel like	Autonomous Research	Competence & Pedagogical Navigation
P2Q9	"I approach my girlfriend and ask her to	Collaborative Inquiry	Competence & Pedagogical Navigation
P3Q4	"I really need AI's help to understand	Comprehensive Academic	Competence & Pedagogical Navigation
P4Q6	"Nanonormalize na rin naman po sa	Ecosystem of	Competence & Pedagogical Navigation
P7Q6	"Lowkey nag-aalala rin ako for them."	Independent Learning	Competence & Pedagogical Navigation
P2Q7	"They influence us to use AI only for	Intellectual Priming	Competence & Pedagogical Navigation
P7Q7	"Super careful talaga ako... nakakaba"	Pedagogical Usage	Competence & Pedagogical Navigation
P4Q8	"Mas dinadalasan ko na po ang	Perspective on Simple	Competence & Pedagogical Navigation
P1Q9	"Nagsesearch po ng mas accurate na	Self-Refinement	Competence & Pedagogical Navigation
P4Q9	"Madali lang naman po gumamit ng AI	Substantive Engagement	Competence & Pedagogical Navigation

P7Q9	"Nagtatanong ako sa mga classmates	Technological Superiority	Experiential and Institutional Pressure
P3Q2	"Honestly, it's satisfying... I'm a bit more reliant on it, especially for generating ideas."	Academic Fatigue	Experiential and Institutional Pressure
P1Q5	"Nadedetermine as pandaraya since gumagamit po ako ng AI ng patago"	Academic Deviance	Experiential and Institutional Pressure
P8Q7	"Minsan ay nagsasabi ang aming mga guro na lahat ng sagot namin ay nanggagaling sa AI tools."	Defensive Projection	Experiential and Institutional Pressure
P1Q7	"Nakakalow morale po since ano po ineexpect po ng mga prof is ano po AI na po"	Demotivation	Experiential and Institutional Pressure
P6Q7	"Nakakafrustrate lang nagcocomment si prof na galing raw sa AI yung ginawa kong essay"	False Accusation	Experiential and Institutional Pressure
P3Q1	"I was really scared to use it because some instructors have AI detectors"	Fear of Penalties and Institutional Monitoring	Experiential and Institutional Pressure
P3Q7	"Some professors encourage us... but there are also professors who really don't allow it."	Policy Fragmentation	Experiential and Institutional Pressure
P8Q1	"Pangangamba sa paggamit ng AI tools at pagiging dependent."	Technoanxiety	Experiential and Institutional Pressure
P4Q4	"Nagiging dependent ako sa AI imbes na magreview ako on my own"	Contextual Normativity	Institutional & Digital Governance
P5Q4	"I sometimes become lazy in studying."	Data Hygiene	Institutional & Digital Governance
P5Q9	"I prefer to search on my own"	Systematic Adaptation	Institutional & Digital Governance
P2Q10	"I don't put my personal details"	User Centric Utility	Institutional & Digital Governance
P6Q5	"shortcut gumamit ng AI... mas maganda na sabihin sa prof"	Academic Transparency	Intellectual Rigor and Professional Conduct
P1Q4	"Kinakabahan po ko baka madetect ng AI check"	Fear of Institutional Detection	Intellectual Rigor and Professional Conduct
P2Q5	"No... I only use it to get ideas"	Intellectual Dishonesty Engagement	Intellectual Rigor and Professional Conduct
P6Q4	"Iba pa rin ang academic writing kasi galing yun sa iba't ibang sources"	Intellectual Integrity	Intellectual Rigor and Professional Conduct
P7Q4	"Nakakakonsensya siya... Iba pa rin kasi yung ikaw mismong nag-analyze"	Professional Conscience	Intellectual Rigor and Professional Conduct
P2Q4	"I don't copy and paste everything. I study the details"	Cognitive Recalibration	Metacognitive Regulation
P7Q8	"Bumabalik ako sa basics... nanonood ng lectures sa YouTube"	Multimodal Traditional Resources	Metacognitive Regulation
P1Q8	"Nagsesearch po ng mga mas accurate na maiintindihan po ni AI"	Prompt Engineering	Metacognitive Regulation
P6Q8	"Nagbabasa ako ng maraming sources... iniisip ko na lang na kaya ko naman"	Resurgence of Self-Reliance	Metacognitive Regulation
P3Q8	"It really depends."	Situational Adaptation	Metacognitive Regulation

P2Q3	"I am confident... I check my work carefully."	Strategic Utilization	Metacognitive Regulation
P7Q3	"Nakakababa minsan ng self-esteem... feeling ko ang pangit ng gawa ko."	Comparative Inferiority	Perceived Fraudulent Competence
P4Q3	"Minsan po, when I am not knowledgeable enough..."	Doubt in Intellectual Capacity	Perceived Fraudulent Competence
P1Q3	"Bumaba po ang aking confidence kasi kahit simple words sine search ko pa po."	Erosion of Self-confidence and over-reliance	Perceived Fraudulent Competence
P5Q5	"With just one click, you can easily know the answer."	Illusion of Competence	Perceived Fraudulent Competence
P7Q2	"May guilt at anxious yung feeling ko... paano pag nasa duty na ako... feeling ko faking it ako"	Imposter Phenomenon	Perceived Fraudulent Competence
P8Q2	"Para sa akin nakakaamaze kasi may mga idea na wala sa kaalaman ko ay nalalaman ko ng maayos at naiintindihan."	Knowledgeable Insecurity	Perceived Fraudulent Competence
P7Q10	"Bawal na bawal puro copy-paste"	Worriiness on Professional Competence	Perceived Fraudulent Competence
P1Q1	"Nagsesearch po akotapos yung mga info na binibigay niya is mali po"	Academic Anxiety	Psychological Dependence & Academic Identity
P6Q3	"Need ko pa isure kay AI... nababawasan confidence ko"	Balanced Confidence	Psychological Dependence & Academic Identity
P8Q3	"Minsan sa sarili kong gawa ay nagkakaroon ako ng self-doubt na baka may katulad akong sagot."	Cognitive Independence	Psychological Dependence & Academic Identity
P7Q5	"Nasa intensyon at paraan ng paggamit yan"	Dependence on Creative Support	Psychological Dependence & Academic Identity
P8Q5	"Depende sa pamamaraan at paggamit nito."	Digital Detox	Psychological Dependence & Academic Identity
P5Q6	"I'm a little worried because what if we end up having the same answers."	Emotional Generalization	Psychological Dependence & Academic Identity
P3Q9	"I don't reach out."	Study Habits Dependency	Psychological Dependence & Academic Identity
P1Q6	"Normal po sir lahat naman po tayogumagamit"	Deviant Normalization	Socio-Academic Acceptance
P2Q8	"I do research on how to use AI properly"	Peer Mentoring	Socio-Academic Acceptance
P2Q6	"It's okay with me because I also use AI"	Peer Solidarity	Socio-Academic Acceptance
P6Q6	"Nakakaramdam ako ng inis kasi nafeel ko unfair"	Perceived Resentment on AI Usage	Socio-Academic Acceptance
P3Q6	"It's your own thing."	Personal Autonomy	Socio-Academic Acceptance
P2Q1	"There were times when AI couldn't give me the answers that I really needed."	Failure to Meet Academic Needs	Technical Cognition and Intellectual Homogenization
P5Q1	"AI was still new to me at that time, and I didn't really know how to use it properly yet."	Insufficient AI Literacy	Technical Cognition and Intellectual Homogenization
P6Q1	"Nakaramdam ako ng pagkagulo..."	Lack of Contextual	Technical Cognition and

	pag naglalagay ako ng prompt at iba iba ang sagot... walang connect"	Understanding	Intellectual Homogenization
P7Q1	"Nag-ask ako sa AI na iexplain yung simple terms... biglang nagbigay ng sobrang lalim na medical jargon"	Output Difficulty	Technical Cognition and Intellectual Homogenization
P4Q1	"Kapag hindi po naibigay yung expected na sagot sa tanong ko."	Prompt-Response Mismatch	Technical Cognition and Intellectual Homogenization

Phase 3: Generating Themes

Candidate Theme	Associated Initial Codes	Scope
Technical Cognition and Intellectual Homogenization	Failure to Meet Academic Needs, Insufficient AI Literacy, Lack of Contextual Understanding, Output Difficulty, Prompt-Response Mismatch	It explores the technical limitations of AI and its cognitive impact on students.
Intellectual Rigor and Professional	Academic Transparency, Fear of Institutional	An ethical tension between detection and moral compass.
Perceived Fraudulent Competence	Comparative Inferiority, Doubt in Intellectual	The erosion of academic self-efficacy and the feeling of impostor phenomenon.
Cognitive Utility	Cognitive Offloading, Delegated Automation	The practical and positive use of AI to foster efficiency.
Socio-Academic Acceptance	Deviant Normalization, Peer Mentoring	It is the relationship between class and classmates' acceptance of AI usage.
Experiential and Institutional	Academic Deviance, Defensive Projection,	The friction between the professor's policy and students' experiences.
Metacognitive Regulation	Cognitive Recalibration, Multimodal Traditional	The strategic methods employed to balance traditional study and digital academic learning.
Cognitive Safeguarding and Digital	Data Privacy Protection, Desirable Difficulty, Digital	Focuses on self imposed protocols and how it mitigate risk associated to AI.
AI Reliability & Technical Trust	Deficit of AI Reliability, Intellectual Differential	Determine by the perception of the student to the AI validation.
Competence & Pedagogical	Active Capacity Development, Analytical Synthesis,	It is how students use AI to increase their ability without decreasing their intellectual integrity.
Institutional & Digital Governance	Contextual Normativity, Data Hygiene, Systematic	Focus on the structures implemented by both institutions a student to manage the integration.
Psychological Dependence &	Academic Anxiety, Balanced Confidence, Cognitive	The effect of AI on the academic learning of the student.

Phase 4: Quality Control (Reviewing Themes)

Candidate Theme	Level 1: Reviewing of Extracts	Level 2: Reviewing the Dataset	Outcome
Technical Cognition and Intellectual Homogenization	Nasuri na aang mga reklamo tungkol sa "Failure to meet needs" at "Lack of context." May sapat na ebidensya na ang teknikal na limitasyon ay nagreresulta sa "robotic" o "standardized" na pag- iisip. Ang mga sagot ay nakatuon sa "AI hallucinations" at "template-like answers."	Nakita kung may overlap sa terminong Cognitive Utility. Napagtanto ko na ang Utility ay positive, habang ang theme na ito ay nagpapakita ng limitations. Sumasalamain sa buong dataset ang limitasyon ng teknolohiya sa paggawa ng orihinal na ideya.	Validated

Intellectual Rigor and Professional Conduct	Nakapokus sa "dilemma" ng pagiging honest vs. academic survival.	Consistent sa lahat ng respondents; ang "integrity" ay nagiging "negotiated value."	Validated
Perceived Fraudulent Competence	"Feelings of faking it" at takot na malaman ang limitasyon.	Dito nagtatagpo ang emosyonal na epekto at academic pressure.	Validated
Cognitive Utility	Pagbanggit sa "efficiency," "speed," at "task automation."	Nagbibigay ng pragmatikong basehan sa paggamit ng AI.	Validated
Socio-Academic Acceptance	Ang "everyone does it" at peer influence.	Ipinapakita ang "peer culture" bilang driver ng behavior.	Validated
Experiential and Institutional Pressure	Conflict sa pagitan ng "strict policy" at "required AI use."	Ipinapakita ang "systemic confusion" sa loob ng eskwelahan.	Validated
Metacognitive Regulation	"Planning," "monitoring," at "prompt refinement."	Ipinapakita ang pag-unlad ng estudyante mula passive patungong active learner.	Validated
Cognitive Safeguarding & Digital Boundaries	Pag-iwas sa "data sharing" at paglimita sa "socmed usage."	Nagpapakita ng personal na "defensive strategies" ng estudyante.	Validated
AI Reliability & Technical Trust	Nakatuon sa "Deficit of AI Reliability" at "Trust Erosion." Ang mga sipi (extracts) ay nagpapakita ng pag-aalinlangan sa katotohanan ng mga sagot ng AI at ang pangangailangan para sa "Validation."	Ang tema ay sumasalamain sa teknikal na aspeto ng ugnayan ng tao at teknolohiya. Ipinapakita nito na ang tiwala ay hindi awtomatiko kundi nakabatay sa accuracy ng tool.	Validated
Competence & Pedagogical Navigation	Pinakamalaking kategorya na nagpapakita ng "Active Capacity Development" at "Independent Learning." Ang mga extracts ay puno ng kwento ng pag-adjust ng mga estudyante sa kanilang paraan ng pag-aaral.	Ito ang core ng "agency" ng estudyante. Pinatutunayan ng dataset na ang AI ay ginagamit bilang "navigational tool" upang mapalalim ang akademikong kakayahan.	Validated
Institutional & Digital Governance	Nakapokus sa "Contextual Normativity" at "Systematic Adaptation." Ang mga extracts ay nagpapakita kung paano sumusunod o nakikibagay ang mga estudyante sa mga digital protocols.	Ipinapakita nito ang "top-down" at "bottom-up" na pamamahala sa loob ng eskwelahan. Mahalaga ito sa pag-unawa kung paano nagiging "standardized" ang paggamit ng digital tools.	Validated
Psychological Dependence & Academic Identity	Puno ng "Academic Anxiety" at "Dependence on Support." Ang mga sipi ay nagpapahayag ng krisis sa pagkakakilanlan: "Sino ako bilang estudyante kung wala ang AI?"	Sumasalamain ito sa mas malalim na emosyonal na koneksyon ng mga estudyante sa teknolohiya. Ang "Academic Identity" ay nagiging "hybrid" sa pagitan ng tao at makina.	Validated

Internal Homogeneity: Ang lahat ba ng quotes (extracts) sa ilalim ng isang theme ay "nag-uusap" o may iisang mensahe?

External Heterogeneity: Ang bawat theme ba ay may malinaw na hangganan? (Hindi sila nagkakapareho ng sinasabi).

Phase 5: Defining and Naming Themes

Final Theme	Definition/Scope	Key "Zinger" Quote
1. Technical Cognition & Homogenization	The cognitive dependence to Artificial Intelligence that resulted to the loss of originality and a template-like output.	"I'm a little worried because what if we end up having the same answers." (P5Q6)
2. Intellectual Rigor & Professional Conduct	It is a tension between personal integrity and academic pressure	"Para sa akin, considered cheating siya kapag puro copy-paste lang talaga yung ginawa mo... bawal na bawal puro copy-paste yung sagot niya for submission." (P7Q5)
3. Perceived Fraudulent Competence	The psychological phenomenon where student feels successful on using AI, rather their own intellect and effort.	"Nakaka-anxious kasi feeling ko faking it ako kapag masyado akong umaasa sa AI para bumilis ang trabaho." (P7Q2)
4. Cognitive Utility	Usage of AI as scaffolding tool to lessen their repetitive tasks.	"Natutuwa sir dahil napapabilis po niya yung trabaho ko, mas nagiging productive po ako." (P1Q2)
5. Socio-Academic Acceptance	The effect of peer pressure and normalization of AI inside classroom setting.	"Normal lang po dahil nanonormalize na rin naman po sa mga kabataan na gumamit ng AI." (P4Q6)
6. Experiential & Institutional Pressure	It is the feeling of the student towards unclear policies about AI usage	"Nakakalow morale po since ano po ineexpect po ng mga prof is ano po AI na po lahat ng gawa po namin." (P1Q7)
7. Metacognitive Regulation	The active regulation of the academic learning process through prompt engineering and cross-referencing.	"Ano po nagsesearch po ako ng mas accurate na tanong kaya para mas mabigyan niya po ng accurate na sagot." (P1Q8)
8. Cognitive Safeguarding and Digital Boundaries	It is an active defense mechanism on self-imposed protocols that has been establish to preserve intellectual integrity which acts as cognitive scaffolding and cognitive substitution.	"Mas focus po sa sarili, maglimit din po na gumamit ng socmeds kasi para po sakin the more na natututo ako gumamit ng AI, mas dumidependen na po ako sa mga easy ways gaya ng pagsagot ng mga activities." (P4Q10)
9. AI Reliability & Technical Trust	It is the critical evaluation of the AI efficiency that encompasses the verifications of hallucinations and skepticism.	"Imbes na mapadali yung pag-aaral ko, na-drain pa ako kakaintindi sa sagot niya. Hit and miss talaga siya, minsan nakakatulong, minsan mas nakakalito.." (P7Q1)
10. Competence & Pedagogical Navigation	It serves as a navigation tool that provides learning concepts and independent research skills without a copy-and-paste system.	"Nagtatanong ako sa mga classmates ko magaling sa technology kung paano ba yung tamang paggawa ng prompt... Para at least, natutulungan nila akong gamitin yung AI for practice para sa exam." (P7Q9)
11. Institutional & Digital Governance	The adaptation and interpretation of school policies with regard to the usage of AI in the classroom environment, and how digital infrastructure are being guided through the implementation of guidelines in the university.	"Kailangan talaga na ikaw mismo magbasa ng iba't ibang sources at gumamit na malalim na pagiisip. Kaya pag gagamit ng AI, mas maganda na sabihin sa prof na gumamit ka like example ay Grammarly para maging honest ka talaga sa gawa mo." (P6Q5)

12. Psychological Dependence & Academic Identity	It addresses the emotional connection and reliance to AI and may alter a student's self-efficacy and intellectual identification.	"Halong emosyon, minsan dahil nagkakaroon sila ng ibat ibang idea na nakukunan mula sa paggamit ng AI tools." (P8Q5)
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Phase 6: Producing the Report

Theme	Description	Subcodes	Data Extract
Theme 1: AI learning tool as a Technical Cognition & Homogenization	The cognitive dependence to Artificial Intelligence that resulted to the loss of originality and a template-like output.	Failure to Meet Academic Needs, Insufficient AI Literacy, Lack of Contextual Understanding, Output Difficulty, Prompt-Response Mismatch	"I'm a little worried because what if we end up having the same answers." (P5Q6)
Theme 2: AI learning tool as a Challenge to Intellectual Rigor & Professional Conduct	It is a tension between personal integrity and academic pressure	Academic Transparency, Fear of Institutional Detection, Intellectual Dishonesty Engagement, Intellectual Integrity, Professional Conscience	"Para sa akin, considered cheating siya kapag puro copy-paste lang talaga yung ginawa mo... bawal na bawal puro copy-paste yung sagot niya for submission." (P7Q5)
Theme 3: Student's Perceived Fraudulent Competence through AI learning tools	The psychological phenomenon where student feels successful on using AI, rather their own intellect and effort.	Comparative Inferiority, Doubt in Intellectual Capacity, Erosion of Self-confidence and over-reliance, Illusion of Competence, Imposter Phenomenon, Knowledgeable Insecurity, Worryness on Professional Competence	"Nakaka-anxious kasi feeling ko faking it ako kapag masyado akong umaasa sa AI para bumilis ang trabaho." (P7Q2)
Theme 4: AI learning tool as Cognitive Utility	Usage of AI as scaffolding tool to lessen their repetitive tasks.	Cognitive Offloading, Delegated Automation, Effective Research Process, Enhanced Efficiency, Productivity Tools	"Natutuwa sir dahil napapabilis po niya yung trabaho ko, mas nagiging productive po ako." (P1Q2)
Theme 5: AI learning tools and the Dimension of Socio-Academic Acceptance	The effect of peer pressure and normalization of AI inside classroom setting.	Deviant Normalization, Peer Mentoring, Peer Solidarity, Perceived Resentment on AI Usage, Personal Autonomy	"Normal lang po dahil nanonormalize na rin naman po sa mga kabataan na gumamit ng AI." (P4Q6)
Theme 6: Navigating AI-Related Experiential & Institutional Pressure	It is the feeling of the student towards unclear policies about AI usage	Academic Deviance, Defensive Projection, Demotivation, False Positive Accusation, Fear of Penalties and Institutional Monitoring, Policy Fragmentation, Technoanxiety, Technological Superiority Frustration, Academic Fatigue	"Nakakalow morale po since ano po ineexpect po ng mga prof is ano po AI na po lahat ng gawa po namin." (P1Q7)

Theme 7: Metacognitive Regulation of AI learning tools	The active regulation of the academic learning process through prompt engineering and cross-referencing.	Cognitive Recalibration, Multimodal Traditional Resources, Engineering, Resurgence of Self-Reliance, Situational Adaptation, Strategic Utilization	"Ano po nagsesearch po ako ng mas accurate na tanong kaya para mas mabigyan niya po ng accurate na sagot." (P1Q8)
Theme 8: AI-Based Cognitive Safeguarding and Digital Boundaries	It is an active defense mechanism on self-imposed protocols that has been established to preserve intellectual integrity which acts as cognitive scaffolding and cognitive substitution.	Data Privacy Protection, Desirable Difficulty, Digital Minimalism, Functional Necessity, Human in Workflow, Selective Guidelines, Source Reversion	"Mas focus po sa sarili, maglimit din po na gumamit ng socmeds kasi para po sakin the more na natututo ako gumamit ng AI, mas dumidependen na po ako sa mga easy ways gaya ng pagsagot ng mga activities." (P4Q10)
Theme 9: Reliability & Technical Trust in AI Learning Tools	It is the critical evaluation of the AI efficiency that encompasses the verifications of hallucinations and skepticism.	Deficit of AI Reliability, Intellectual Differential Anxiety, Linguistic Decoding, Seeking Validation Attitude, Technical Errors and Reliability Issues, Trust Erosion, Trusting AI Efficiency	"Imbes na mapadali yung pag-aaral ko, na-drain pa ako kakaintindi sa sagot niya. Hit and miss talaga siya, minsan nakakatulong, minsan mas nakakalito.." (P7Q1)
Theme 10: Competence & Pedagogical Navigation in AI Integrated Learning	It serves as a navigation tool that provides learning concepts and independent research skills without a copy-and-paste system.	Active Capacity Development, Analytical Synthesis, Authentication of Personal Competence, Autonomous Research, Collaborative Inquiry, Comprehensive Academic Knowledge, Ecosystem of Comprehensive Knowledge, Independent Learning, Intellectual Priming, Pedagogical Usage, Perspective on Simple Usage, Self-Refinement, Substantive Engagement	"Nagtatanong ako sa mga classmates ko magaling sa technology kung paano ba yung tamang paggawa ng prompt... Para at least, natutulungan nila akong gamitin yung AI for practice para sa exam." (P7Q9)