Graduate Students at the Frontier of GenAI: Emerging Trends from a Southwest Borderland University

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Abstract

The rapid emergence of generative AI (GenAI) is reshaping higher education, offering both opportunities and challenges. In this context, graduate students are a critical population for examining adoption as they tend to experience both advanced academic work and professional preparation. This study explored graduate students' awareness, uses, perceptions, and future intentions regarding GenAI within the context of taking one or more educational technology courses at a southwest borderland university. A qualitative descriptive, cross-sectional design was employed. Data were collected via an online survey (N = 24) including multiple choice, Likert-scale, and open-ended items. Connectivism served as the primary theoretical perspective, with the Concerns-Based Adoption Model (CBAM) Stages of Concern providing a complementary framework for interpreting adoption patterns. Findings indicated that students moved from limited prior exposure to more deliberate integration of GenAI. Three key thematic trends emerged: (1) promise, productivity, and partnership, where GenAI was framed as a collaborative partnership that augments rather than replaces human agency; (2) boundaries and ethics, including strong concerns about academic integrity, accuracy, equity, and over-reliance; and (3) navigating uncertainty, marked by inconsistent institutional policies and discipline-specific variation. Overall, graduate students are navigating GenAI adoption with enthusiasm tempered by boundary consciousness. They viewed GenAI literacy as increasingly essential for academic and career competitiveness yet stressed the importance of policies and practices that emphasize appropriate augmentation, ethics, and equity in higher education.

Keywords: Generative Artificial Intelligence (GenAI); higher education; graduate students; connectivism; Concerns-Based Adoption Model (CBAM); AI literacy

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Introduction

As of 2025, only three years have passed since the explosive emergence of generative artificial intelligence (GenAI) technologies, which are already reshaping the landscape of higher education and influencing teaching and teacher education, research, and professional practices across disciplines. Its rapid adoption presents both generative affordances alongside complex challenges, particularly for graduate students who are at the intersection of advanced academic study and career preparation (Chan & Tsai., 2023; Barros et al., 2023). As large language models such as ChatGPT, Claude, Gemini, and CoPilot have gained widespread accessibility, their integration into academic workflows has become increasingly prevalent among student populations, particularly at the graduate level where research and analytical tasks predominate (Kasneci et al., 2023; Saúde et al., 2024). This technological disruption has prompted pressing questions about trends in students' use of GenAI focused on academic integrity, originality and creativity, bias, pedagogical effectiveness, and the evolving nature of scholarly work in the digital age.

At a southwest borderland university situated in the New Mexico/Texas/Mexico border region, where unique transnational cultural, linguistic, and socioeconomic factors shape student experiences, examining trends in the use of GenAI provides critical insights into how this technology is reshaping learning and scholarship in diverse academic settings. Graduate students, positioned at the intersection of advanced coursework and independent research, represent a particularly significant demography for examining GenAI adoption patterns. Graduate students regularly engage in research and complex data analytical tasks and thus stand to benefit from AI-assisted data analysis workflows (Drosos et al., 2024). However, the borderland context adds unique dimensions to this technological adoption, as students in these regions often navigate multilingual academic environments, diverse cultural backgrounds, and varying levels of technological access and literacy.

As we developed this study, a key component included identifying trends in how graduate students use emerging and advanced technology tools, particularly in this case, GenAI, in their academic & professional pursuits. As educators in higher education, we focus on examining the role of technology in supporting contextualized knowledge development through active interaction and engagement. In a previous study, two of the authors documented how they navigated the integration of social media and emerging AI tools such as ChatGPT in their online graduate courses at a southwest borderland university (Parra & Chatterjee, 2024). A key observation from that work was the rapid adoption and experimental use of GenAI, especially among graduate students. This was particularly evident when two separate teams in one fall 2023 class about designing synchronous instruction, independently chose to focus their webinar presentation projects on AI in education, indicating not only strong engagement with AI tools but also interest in their purposeful applications.

Our collaborative exploration of AI mirrored our emphasis on structured engagement and addressing concerns about academic integrity, for which we developed a class guide titled "AI Values and Norms," which emphasized transparency and ethical use by students. By prioritizing human connection and sociocultural responsiveness in our own teaching practice, we created a foundation from which this study emerged, examining how GenAI is experienced in higher

education and to highlight the critical voices and perspectives of our graduate students. Thus, the purpose of this study was to explore graduate students' awareness, uses, perceptions, and future intentions regarding GenAI within the context of taking one or more educational technology courses at a southwest borderland university.

Review of Related Literature

The integration of generative AI in higher education has reached a threshold with studies revealing rapid and widespread adoption across diverse academic contexts since the launch of ChatGPT 3.5 in late 2022 (Întorsureanu et al., 2025). Sullivan et al. (2023) found that approximately 43% of college students had used ChatGPT for academic purposes within six months of its public release, while Qu et al. (2024) reported discipline-specific variation, with STEM and humanities students showing different preferences for AI assistance. Freeman (2025) similarly documented undergraduate AI usage surging from 66% to 92% between 2024 and 2025, with GenAI use for assessment increasing from 53% to 88%. Students primarily used GenAI for idea generation, explanation, and article summarization, while 18% directly incorporated AI-generated text into their work.

Recent studies have shown similar patterns of GenAI related complexity, particularly among graduate teaching assistants who navigate dual-role challenges as both students and instructors (Zhang, 2025). This dual positioning creates ethical and pedagogical tensions as they must negotiate personal use with instructional policy, expectations around academic integrity, and evolving institutional guidelines. These complexities parallel broader trends in recent global research. A survey on students and lecturers in higher education institutions across 76 countries reveals high awareness and recognition of GenAI tools, with ChatGPT being the most recognized due to its accessibility and versatility (Yusuf et al., 2024). Institutional surveys show adoption rates are highest among graduate students (66%) compared to undergraduates (56%) and faculty (58%) (Baytas & Ruediger, 2024). Compared to undergraduate students and faculty, graduate students demonstrated more complex usage patterns, particularly in research processes such as literature reviews, statistical data analysis, hypothesis generation, code generation, academic writing and manuscript preparation, reflecting more strategic application of AI capabilities for academic purposes (Yusuf et al., 2024). The primary reasons students cite for use of AI are to save time (51%) and improve the quality of their work (50%), while primary concerns are plagiarism (53%) and getting false results (51%) that discourage usage (Freeman, 2025).

Research on learning outcomes indicates that higher levels of learning occur when students use GenAI to construct knowledge through a mastery approach (Pallant et al., 2025). Competence studies similarly indicate that individual AI competency levels significantly impact how different GenAI tools are evaluated and used for learning and assessment purposes (Heil et al., 2025). Further research shows that graduate students and researchers often view GenAI through three distinct lenses, as a "work horse" for productivity, as a "language assistant only" for editing tasks, or as a "research accelerator" for comprehensive research enhancement (Andersen et al., 2025). Within research contexts, GenAI literacy for graduate students includes developing prompt engineering skills as a key digital competency, with frameworks emerging to guide effective and responsible use in academic research (Francis et al., 2025).

The rapid acceleration of GenAI use has also challenged traditional assessment practices. An analysis of the top 50 U.S. universities found that 94% have developed faculty guidelines emphasizing clear frameworks for GenAI use and generally hold positive attitudes toward AI integration (An et al., 2025). Yet only 29% of students agree that their institutions encourage AI use compared to 40% who disagree, highlighting a persistent policy gap (Freeman, 2025). Universities face concerns about job displacement, particularly for graduate students who rely on teaching assistant roles for financial stability and professional development, as these roles involve grading and administrative tasks that are increasingly at risk of AI automation (Capano et al., 2025). Consequently, the dual-edged nature of GenAI integration underscores the need for frameworks that complement rather than replace human proficiencies, with institutions balancing innovation opportunities against concerns about academic integrity, authenticity, and the development of essential cognitive skills (Capano et al., 2025).

Overall, these studies illustrate widespread adoption, growing sophistication of use, and a complex landscape of ethical, instructional, and institutional tensions. However, significant gaps remain in our understanding of how awareness, usage and perspectives influence GenAI adoption and usage patterns among graduate student populations specifically. Further, student voice is limited yet critical in the ongoing GenAI discussions (McGrath et al., 2025; Bearman et al., 2025).

Theoretical Framework

This study draws upon two frameworks: Connectivism (Siemens, 2005; Downes, 2008; Goldie, 2016) and the Concerns-Based Adoption Model (CBAM), with CBAM applied specifically through the Stages of Concern (Hall & Hord, 2015). Connectivism was identified early as central to the understanding of GenAI as a learning phenomenon, while adoption models informed the survey design through constructs such as "awareness," as noted in Rogers' Diffusion of Innovations (2003) and in early documentation of CBAM (Hord & Loucks, 1980). Rogers' model and the CBAM Levels of Use (Hall & Hord, 2015) were initially considered for an additional framework; however, these models felt more linear, assuming stable, routine implementation patterns that did not align with the incredibly rapid, emergent and uneven nature of GenAI use in higher education. In contrast, CBAM's Stages of Concern offered a more appropriate lens for this study because it captures the emotional, cognitive, and informational sense-making that individuals experience when encountering a rapidly evolving innovation.

Connectivism (Siemens, 2005; Downes, 2008; Goldie, 2016), serves as the study's primary theoretical foundation, emphasizing learning occurs across dynamic networks of people, resources, and non-human entities such as digital technologies. Within this view, these entities function as "nodes" in a knowledge network. Knowledge is viewed as distributed, and the learners gain understanding by accessing and engaging with diverse nodes across networks. Further, learning is understood as a continual process, since knowledge evolves rapidly and the ability to discern patterns across networks is central to meaning making. GenAI, in this context, acts as an additional node in graduate students' academic and professional networks. It expands the range of connections available to learners, enabling them to draw on machine-generated insights alongside human and material resources. Connectivism therefore provides a lens for

understanding how students situate GenAI within broader ecologies of knowledge and how they adapt their learning practices in dynamic, technology-mediated environments.

While Connectivism serves as the primary theoretical foundation, the Concerns-Based Adoption Model (CBAM) (Hall & Hord, 2015; Hord, Rutherford, Huling, & Hall, 2014) emerged as a complementary lens for interpreting how participants, in the roles of both students and practitioners, made sense of, used, and began to adopt GenAI tools. CBAM includes three principal dimensions: (1) Stages of Concern, (2) Levels of Use, and (3) Innovation Configurations. The Stages of Concern were most relevant for this study as they emphasize that adoption-related concerns are often non-linear, overlapping, and context dependent (Hall & Hord, 2015; Hord, Rutherford, Huling, & Hall, 2014). These seven stages—unconcerned (originally termed "awareness"), informational, personal, management, consequence, collaboration, and refocusing—provided a practical interpretive vocabulary to discuss participants' responses in this study. These stages provided some of the language for describing and interpreting the graduate student adoption patterns that included uncertainty, exploration, enthusiasm, as well as hesitation, a well-suited framework for discussing early-stage GenAI integration. Of note, the shift from "awareness" to "unconcerned" in the recent iteration of the model raises an interesting tension for educators. The term "awareness" denotes an implicit pedagogical imperative that positions educators as active facilitators of engagement rather than merely respondents to a lack of concern. This is a distinction that warrants further future exploration, particularly in contexts of early-stage technology adoption.

Methods

A qualitative descriptive, cross-sectional design was used for this study, with the goal of capturing a "snapshot" of graduate students' current awareness and use of GenAI, as well as their perceptions, attitudes, and future outlook. This design was well-suited to exploring experiences and perspectives rather than examining changes over time or the effects of a formal intervention. The following four key research questions were addressed with this study:

RQ1. What are the current trends in graduate students' awareness, experiences, and use of GenAI in academic and professional contexts?
RQ2. How do graduate students perceive the benefits, challenges, and ethical boundaries of integrating GenAI into their learning and teaching practices?
RQ3. What institutional policies, practices, and guidance shape graduate students' use of GenAI?
RQ4. What future intentions and outlooks do graduate students hold for the role of GenAI in their academic, professional, and personal lives?

Participants and Context

Participants were drawn from 69 graduate students who, between summer 2024 and fall 2025, completed one or more courses in online educational technology at a southwest borderland university that were taught by one of the study's co-authors. This co-author is also the coordinator for the educational technology program at this university. The program offers two graduate-level options, a master's program consisting of 10 courses and a graduate certificate

program consisting of four courses. The student body includes preservice and in-service K–12 teachers, community college and university faculty, doctoral students among others. Many are practicing educators balancing graduate study with professional responsibilities. The program reflects the university's diverse borderland context, with representation from Hispanic/Latinx and multilingual populations.

The participants of this study include those in one of the online educational technology programs or those taking one course as an elective. Course topics included instructional design for blended and online instruction, educational technology integration (including GenAI), technological, pedagogical and content knowledge (TPACK), and culturally responsive learning environments fostering community (Chatterjee & Parra, 2021). All courses were delivered fully online, primarily asynchronously with opportunities for synchronous engagement through class meetings, team meetings, and one-on-one instructor and student conferences.

Students' exposure to GenAI was partly shaped by the program curriculum itself. For example, instructors had begun integrating AI-related tools and discussions into coursework to model potential applications of these technologies in teaching and learning. While this was not a formal intervention designed by the research team, it formed part of the natural learning environment influencing participants' awareness and use of GenAI.

Data Collection

Data were collected using an online survey (see Appendix A) titled, *Research Questionnaire: Perceptions and Usage of Generative AI in Academia*. The survey consisted of five domains: Background and Demographics; Prior Exposure and Program Context; Awareness and Usage of Generative AI; Perceptions and Attitudes; and Future Outlook. Items were a mix of multiple-choice, Likert-scale ratings, and open-ended text boxes enabling both descriptive trend data and narrative elaboration. The members of the research team met in Zoom several times to discuss and collaboratively develop the survey. The survey instrument (see Appendix A) was designed to capture graduate students' experiences with GenAI across the noted five domains. These domains map onto the four overarching research questions that guided the study (see Appendix B).

Students were recruited via an email distribution list provided by the co-author who was also program coordinator and instructor for the educational technology courses referred to in this study. One researcher who was not the instructor created and sent the recruitment emails. Participation was voluntary, informed consent was embedded in the invitation and survey introduction, and no incentives were provided. The survey was sent at the beginning of summer 2025 and remained open through the first two weeks of class at the southwest borderland university, with a reminder email sent by the other researcher, also not the instructor, at the beginning of the fall 2025 semester. The survey remained open for an extended period, with two additional responses received after initial analysis began. The final dataset included 24 responses.

Data Analysis and Trustworthiness

Given that one researcher was also the instructor of record for the participants of this study who were graduate students at the university and who represent a protected class, this co-author did not have access to the raw survey data and identifiable information until after the class concluded and grades were posted. This procedural separation ensured that instructional roles did not intersect with data handling or early analysis. Analytic rigor was enhanced through multiple strategies, including analyst triangulation, peer debriefing via Zoom meetings, and the maintenance of an audit trail documenting analytic memos and coding decisions.

Descriptive statistics (frequencies and percentages) were calculated for closed-ended items. Open-ended responses were examined through a multi-stage qualitative content analysis conducted by the four authors. First, two researchers independently reviewed the data and met to discuss preliminary impressions and recurring patterns and themes. One of these researchers then drafted paragraph-level summaries for each survey question to synthesize emerging patterns. Next, the instructor/coauthor reviewed these summaries, to clarify wording, collapse overlapping categories, and strengthen the organizational coherence of the analysis. A fourth researcher subsequently examined the analytic outcomes to confirm consistency and provide an additional interpretive check. Finally, all authors reviewed the manuscript holistically to ensure shared understanding and consensus regarding the analytic interpretations. Due to the small sample size of this study, the research team did not require the use of large-scale qualitative data analysis software such as Qualtrix or NVivo. Instead, qualitative data analysis in this work was assisted by OpenAI's GPT-4.

Results

The results of this study align with emerging trends in the use of GenAI. Trends signal both measurable shifts and evolving priorities directly impacting the field. Similarly, the results of this study provide insight into patterns and shifts in graduate students' engagement with GenAI. These results contribute to broader conversations about GenAI use and implementation in academia. The study design enabled the collection of both descriptive data on usage patterns and rich qualitative reflections on participants' experiences, concerns, and perspectives of GenAI in education.

The results of the administered survey are organized around five domains (1) demographic and professional background; (2) prior exposure to and program context of GenAI; (3) awareness and usage of GenAI tools; (4) perceptions of and attitudes (e.g., usefulness, productivity, academic integrity); and (5) future outlook in regards to GenAI (e.g., benefits, challenges, contextual trends, institutional support). Following is a description of our results framed by the five domains listed above.

Domain 1: Demographic and Professional Background

Current Roles

Of the 69 graduate students who were invited to participate, 24 took the survey, representing a diverse cross-section of the academic community. Community college faculty members (n = 10) comprised the largest group followed by K–12/Inservice educators (n = 6).

Other professional roles represented included university faculty members (n = 2), community college staff (n = 1), and program specialists (n = 1). Given the small sample size and limited number of demographic categories, participant roles are reported narratively rather than in a table.

Many of the participants held dual roles as both students and educators. This dual positioning, as learners engaging with GenAI in their coursework while simultaneously considering its pedagogical applications, provides a unique vantage point for understanding adoption patterns in higher education.

As noted by the researcher who also serves as instructor and program coordinator, the high proportion of community college faculty in the sample reflects the presence of a funded cohort from a local community college. This cohort's participation underscores how institutional partnerships can influence the composition of the student body in program-level research. Notably, edtech courses are also available to students across campus, including doctoral students, which further contributes to the diversity of professional and academic backgrounds represented in the study sample.

Domain 2: Prior Exposure and Program Context

Prior to Taking Courses in Educational Technology

The survey responses for the question about participants' experience prior to taking educational technology courses indicated that most graduate students entered the courses with limited to minimal prior exposure. Most respondents described having little to no prior experience, noting "no experience," "none to very little," or only casual familiarity with AI systems embedded in social media platforms like Google or Facebook. This suggests that for many students, the structured exploration of AI-related topics began within the context of their edtech coursework.

There were several outliers who provided a notable contrast to this overall trend. One respondent mentioned having five years of military experience, which may have provided indirect exposure to AI-driven technologies, though the context was not detailed. Another identified as a self-researcher/enthusiast, signaling a proactive personal interest in AI that likely predated formal instruction. A third participant reported experimenting with AI-based lessons for upper elementary and middle school students, suggesting early adoption of GenAI into teaching practice.

Beyond these outliers, the overall data indicate that students entered the program with low levels of GenAI familiarity. The presence of students who had basic accounts with tools like ChatGPT, but only used them for simple queries, highlights an important distinction between awareness of AI tools and meaningful engagement with them. Many students knew of AI tools but had not yet leveraged them for academic or professional tasks. This gap reflects a broader trend in higher education in which public awareness and casual use have grown rapidly but deep and purposeful integration into academic or professional practice has lagged.

Exposure and Experiences with AI-Related Activities in EdTech Courses

Responses to the question about AI-related activities reflected a broad range of GenAI engagements. In contrast to the baseline data responses about prior use, where most students reported minimal or limited prior exposure, these responses highlighted structured activities, guided reflection, and critical discussions as central features of their exposure and experiences in EdTech courses. Increased efficiency and productivity were impacted, whereby several students described assignments that introduced AI as a support tool for academic tasks such as using virtual assistants, generating outlines, or helping locate sources. These activities were valued for saving time and improving organization, with students noting "how useful AI is" and that they "appreciate how time efficient it is."

Creative introductory activities were another type of activity discussed. Examples included creating superhero characters, designing AI self-portraits, or producing digital artwork. These activities allowed students to experiment with generative tools in playful and imaginative ways while also exposing some of the limitations of AI including inaccuracies in representing cultural identity or physical features. These experiences demonstrate how AI can be positioned as both a creative partner and a learning object, fostering student awareness of its strengths and weaknesses. For example, avatar creation emerged as a particularly memorable activity, with multiple students recalling this exercise. These avatar-based activities served dual purposes: introducing students to GenAI's creative capabilities while simultaneously revealing its limitations in accurately representing diverse cultural identities and physical features, a critical learning moment about AI bias.

A third recurring type of experience focused on the ethical, safe, and critical engagement of AI. Students recalled discussions and assignments that addressed topics like bias, academic integrity, hallucinations, copyright, and proper citation of AI-generated content. One student cited the guideline to "trust but verify", reflecting encouragement to use AI critically rather than uncritically accepting its outputs. Others emphasized that AI should be positioned as an assistant, not the leader, which demonstrates awareness of maintaining human agency in academic and professional work.

Iterative practice and reflections were another type of engagement for respondents. They remembered AI-related activities that included exploratory tasks, such as technology evaluations or research-related exercises, and even tailored examples for math students. The reflective component, where students transparently disclosed their processes and critically examined their AI use (e.g., including an AI statement in coursework), indicated that AI was framed not only as a tool for efficiency but also as a subject of inquiry, aligned with professional and academic responsibility.

Finally, some participants commented on broader societal implications. One student noted learning to use AI as a conversation partner and to "ensure that I was stating things in a culturally responsive way and did not hold any unknown biases." Another student described AI as "complicated" and difficult for society to fully grasp, observing how the media tends to amplify fears while underplaying AI's increasing integration into daily life. Such comments suggest that students' critical consciousness was being shaped not only by the tool-based

activities but also by the course discussions that were extended to include cultural narratives and public discourse around AI.

Overall, these responses suggest that the integrations of AI-related activities into edtech courses moved students from minimal prior exposure to active and reflective engagement within EdTech courses. Through a combination of productivity-focused tasks, creative assignments, and structured discussions regarding culture and ethics, students reported developing a nuanced understanding of AI's potential and its limitations.

The results of the administered survey are organized around five domains (1) demographic and professional background; (2) prior exposure to and program context of GenAI; (3) awareness and usage of GenAI tools; (4) perceptions of and attitudes (e.g. usefulness, productivity, academic integrity); and (5) future outlook in regards to GenAI (e.g., benefits, challenges, contextual trends, institutional support).

Domain 3: Awareness and Usage of GenAI

Familiarity with GenAI Tools

Responses for students' familiarity with GenAI tools reflected a tiered adoption pattern. Students reported near-universal reliance on general-purpose GenAI tools, a moderate engagement in creative and education-focused tools, and limited use of specialized/niche or technical models. To better understand this tiered adoption, we report which applications students engaged with most frequently and the specific usage of the applications.

ChatGPT (100%), Gemini (75%), CoPilot (62.5%), and Claude (50%) were the most widely used general-purpose AI applications, supporting writing, summarization, coding, and productivity tasks. Participants reported using the following applications for visual content generation and design tasks: Canva Magic Studio (50%) and MidJourney (16.7%). Magic School AI (50%) emerged as a prominent education-focused tool supporting lesson planning, content creation, and accessing teaching resources. Tools like Deepseek (20.8%), Meta Llama (12.5%), Qwen (4.2%), Cohere (0%), and Falcon (0%) reflected lower levels of awareness or usage often associated with more technical or research-specific use cases.

Beyond the listed survey options, students reported using additional tools. For example, a category of tools that surfaced includes existing software that has integrated AI features such as Adobe Acrobat with integrated GenAI art functions. Others, such as Perplexity, Boodlebox, and NotebookLM/Google Notebook, highlight interest in integrating platforms that support knowledge organization and Application Programming Interfaces (API) based access to multiple AI systems. ChatPDF was a tool that further illustrated the value of AI in academic contexts by enabling interactive engagement with texts. These responses illustrate an exploratory interest in extending AI use across diverse academic, professional, and creative contexts.

GenAI Tools Students Are Most Familiar with and How They Use Them

ChatGPT was by far the most widely referenced tool, appearing in nearly every response. Students reported using it for brainstorming, writing support, research, proofreading, lesson planning, and curriculum development. Other frequently noted tools included CoPilot (widely available through institutional access), Gemini, and Claude, each used for more specific purposes. CoPilot was valued for outlining, revising writing, and sourcing materials, while Gemini was often used as a secondary option, offering alternative perspectives or supporting specific course-related tasks, and Claude was used for coding.

Education-focused tools like Magic School AI and ChatPDF were recognized as valuable for curriculum design, resource development, and document analysis, demonstrating their relevance to graduate-level coursework and teaching preparation. Some respondents also described experimenting with Perplexity (AI powered search tool), Craiyon (image generation tool), NotebookLM/Google Notebook (research/knowledge management tool), and Boodlebox (AI platform designed specifically for education), highlighting curiosity beyond mainstream tools. Overall, these responses indicate that students are moving from basic awareness to purpose-driven application, with GenAI tools supporting their own academic and professional work as well as their teaching practices, professional development, and student-centered instruction.

Frequency of Use

Patterns of frequency varied across the 24 respondents. About one-third (33.3%, n=8) reported daily use, integrating AI regularly into academic and professional routines. The largest group (37.5%, n=9) used AI weekly, while 25% (n=6) reported occasional use. While only one respondent (4.2%) reported never using these tools. These results indicate that nearly 70% engage at least weekly with AI, which underscores a strong overall presence of GenAI in the academic, personal, and professional lives of graduate students.

Purposes for Which Students Used GenAI Tools

Students described a range of purposes for which they used GenAI. The most common was brainstorming or idea generation (95.8%), reflecting AI's role as a thought partner. Writing assistance was also widespread (79.2%), including drafting, editing, and revising academic assignments. More than half of the respondents reported using AI for graphic or media creation (66.7%), and more than half (54.2%) demonstrated that they were beginning to integrate AI into teaching practices, lesson planning, rubric creation, and educational presentations. Activities gaining traction included coding or technical tasks (20.8%) and research design or analysis (45.8%). Fewer responses were recorded for grading or feedback (12.5%), while one participant reported no usage at all. Several responses extended to supporting personal uses such as gardening, cooking with macros-based recipes, and designing fitness routines. Overall, the data reveal that students primarily adopt AI for idea generation, writing, and creative work, with limited integration into technical and evaluative functions. These results may serve as early indicators of trends in future use of GenAI.

Intentions for Future Use

Nearly all respondents indicated plans to continue using GenAI in the future, though in varied ways. Common intentions included using it for efficiency and productivity, particularly in drafting, lesson planning, content creation, and resource development. Several noted that AI helps reduce time spent on routine academic tasks, freeing them to focus on higher-order thinking. Several participants anticipated expanding into research design, data analysis, and media creation, while others emphasized its value for refining tone, clarity, and accuracy, in particular for multilingual learners and emergent English language speakers.

Respondents also acknowledged the importance of using GenAI critically, framing it as a support tool rather than a replacement, while noting intentions to critically engage with issues of accuracy, bias, and equity. A few responses highlighted the importance of teaching about AI, signaling a desire to introduce students to responsible practices and integrate AI-focused activities into classrooms. One respondent mentioned personal uses such as vacation planning and business ideation. Overall, intentions suggest sustained and expanded adoption, balanced by an awareness of ethical and pedagogical considerations and mirroring broader trends surrounding the ethics of AI usage

Reflections Prompted by the Survey

The final open prompt in this section elicited deeper reflections on GenAI use. Several participants reported that the survey itself prompted them to think more critically about their daily practices, not only as a support for productivity but also as something that shapes their leadership, teaching, and modeling of responsible use. Responses emphasized a tension, especially in their educational contexts, between fear and opportunity. Some educators worried that AI could replace them, and others reframed it as a tool that enhances learning. Concerns about plagiarism and institutional ethics were frequently raised with a trend towards reverting to paper assignments as a way to avoid misuse.

Some participants expressed curiosity about lesser-known AI tools, calling for more exposure and training. Several participants emphasized the value of AI Use Statements, detailed instruction for AI use, and clear citation practices as strategies for guiding ethical integration. Overall, these reflections reveal both hope and hesitation, underscoring the need for professional development that addresses concerns, emphasizes ethics, and empowers educators to confidently integrate AI.

Domain 4: Perceptions and Attitudes Toward GenAI

Helpfulness in Learning and Teaching Practice

Survey responses indicated overwhelmingly positive perceptions of GenAI in teaching and learning. None of the respondents rated these tools as "not helpful," while only one respondent (4.2%) rated it "slightly helpful." Almost one third (29.2%) of participants found GenAI "moderately helpful," while 37.5% rated it as "very helpful," and one third (33.3%) rated it as "extremely helpful." This distribution shows that students largely view GenAI as more than a marginal aid, positioning it instead as a valuable tool for enhancing efficiency, creativity, and pedagogical support.

Agreement with Statements on Productivity, Integrity, and Institutional Support

Participants were provided with a series of statements to select if they agreed with the statement. Like recent trends in AI, participants reported agreement with statements highlighting GenAI's practical benefit. A large majority (79.2%) agreed these tools improve productivity and support personalized learning. Half (50%) expressed confidence in their ability to use GenAI effectively. At the same time, concerns were evident with 83.3% of respondents worried about issues of academic integrity and half (50%) agreed that GenAI limits original thinking or creativity, indicating that while students embrace the utility of GenAI, they remain cautious about its implications.

The data also revealed a potentially significant issue with institutional support. Only 25% of participants agreed that their institution has provided adequate guidance on AI use. These results suggest that the participants are embracing productivity and learning benefits but also navigating ethical challenges and institutional ambiguity largely on their own.

Domain 5: Future Outlook in Regard to GenAI

Potential Benefits

Participants identified three primary areas of benefit from integrating GenAI into higher education: (1) productivity and efficiency, (2) accessibility and personalization, and (3) pedagogical innovation. Productivity and efficiency were the most frequently cited advantages with respondents emphasizing timesaving, streamlined research processes, and increased output potential. Several noted that GenAI provided quicker access to academic resources and enabled more efficient writing processes, helping to address bottlenecks in graduate-level work.

Accessibility and personalization were highlighted with students describing GenAI as "your own tutor at any time," and in alignment with Universal Design for Learning (UDL) principles. They noted that such 24/7 availability could particularly benefit diverse populations and students who require additional scaffolding for complex tasks. One participant explicitly connected GenAI to UDL for Learning principles, noting, "we will be able to create assignments that support a wider range of students." This connection between GenAI and established pedagogical frameworks suggests that adoption is not occurring in isolation but is integrated with existing educational best practices.

Finally, respondents pointed to pedagogical innovation, citing GenAI's capacity to spark new ideas, offer alternative perspectives, and enable or expand creative applications such as media production. Collectively, these responses suggest that students see GenAI as a tool that can complement and enhance, rather than replace, human creativity and instructional practice.

Challenges and Concerns

While participants expressed enthusiasm for the potential benefits of GenAI, they also voiced five main categories of concern. The most frequently cited challenge related to academic integrity, with multiple respondents explicitly mentioning cheating, plagiarism, and integrity violations. Several participants expressed fear that GenAI use could result in students doing only the "minimum work" without fully understanding, engaging in, or learning from their assignments.

Another area of concern focused on over-reliance and skill atrophy, as respondents worried that students might become dependent on AI tools rather than developing critical thinking and creative problem-solving abilities. Concerns about information accuracy and bias were also common, with respondents noting hallucinations, misinformation, and the ongoing need for fact-checking. Students recognized that GenAI outputs require verification and expressed worry about accepting AI-generated content without critical evaluation.

Equity and access disparities emerged as another concern, with one respondent noting how socioeconomic factors could create educational gaps between students who can access premium AI tools and training versus those who cannot. Finally, respondents mentioned faculty adaptation challenges, noting that some educators were "not willing to change their knowledge testing" methods to accommodate new technological realities.

Overall, these categories of concern suggest that the participants understood that successful GenAI integration requires institutional and pedagogical transformation beyond simple tool adoption.

Observed Trends in the Field

When asked about trends in their environment and fields, respondents described disciplinary variation in GenAI adoption, with distinct patterns emerging across different contexts. In higher education administration, GenAI was noted as being strategically integrated for "drafting reports, preparing presentations, and brainstorming ideas," suggesting professional applications with accompanying ethical discussions about "trust" and appropriate usage.

In creative fields, they reported both resistance and adaptation. One respondent, self-identified as an art educator, commented that "the art that AI produces is terrible" while also acknowledging its utility for graphic design and spatial planning. This reflects an understanding of AI's creative limitations while recognizing its practical value, reinforcing the idea of AI as a complement rather than a replacement of human creativity.

In healthcare and technical fields, respondents described cautious experimentation. Dental radiography applications, for example, were acknowledged as advancing but "not super reliable...yet," pointing to professional use cases that require further validation before broader adoption. In K-12 education, concerns about "plagiarism" and reliance on "AI checkers," were prominent alongside positive applications including AI-generated podcasts for "lesson starters" and goal-setting assistance for students.

Several respondents indicated ubiquitous integration across software platforms, with one noting AI embedded in "most software coming out," including enterprise systems like Oracle. This signals infrastructural adoption beyond individual choice. Across contexts, however, privacy concerns remained paramount. One respondent observed that institutions were "slowly starting to open up to AI but the concern about privacy is always brought up." Another noted that AI had begun taking over "students and our office hours" suggesting workflow disruption that required adaptation.

Overall, respondents described GenAI integration as expanding and likely inevitable across disciplines, but still in a transitional phase. They emphasized that while applications are emerging in field-specific ways, concerns about ethics, privacy, and quality continue to demand careful management. Taken together, these findings indicate that participants are increasingly engaging with GenAI in informed and purposeful ways. However, this engagement is occurring in the context of inconsistent or unclear institutional guidance, which becomes more apparent when examining institutional policies and practices.

Institutional Policies and Practices

The data revealed a concerning pattern of policy awareness, with multiple respondents explicitly stating they were 'unaware' or 'not sure' about institutional guidelines. This suggests not merely inadequate policies but also a communication failure, where existing guidelines may not be reaching their intended audience effectively. For example, the data revealed a significant gap in institutional support. Less than one-fourth (22.2%) of participants agreed that their institution has provided adequate guidance on AI use. Taken together, these results suggest that the participants are simultaneously confident and concerned. They are embracing productivity and learning benefits but navigating ethical integrity challenges and institutional ambiguity largely on their own.

Participants described an inconsistent institutional approach to GenAI policies. Most noted that guidance was provided at the syllabus-level, with individual instructors making independent decisions about how AI could be used in their courses. A common approach involved three possible syllabus statements, ranging from broad permission to conditional use to no use of GenAI. However, these statements tended to emphasize citation and disclosure requirements rather than offering substantive guidance on appropriate or effective use. This created what one respondent referred to as a "gray area," where expectations varied widely from class to class.

Awareness gaps were also evident. Several respondents noted that they were unfamiliar with institutional policies or were not "up to date" on current guidelines, suggesting that even when formal policies exist, they were not well communicated. The instructor-dependent

approach means students must navigate different AI expectations in each course, potentially creating confusion about academic standards. Most concerning is the apparent absence of comprehensive institutional frameworks, leaving both faculty and students to independently interpret appropriate GenAI usage without clear, unified guidance from administration.

Overall, participants experienced policies and practices as fragmented and inconsistent. While some courses provided comprehensive guidance and resources, others offered minimal syllabus statements, leaving students and educators to navigate without clear institutional frameworks. Beyond institutional policies and practices, participants also reflected on their intentions for future use of GenAI and the personal trends shaping how these tools might be integrated across academic, professional, and everyday contexts.

Intentions for Future Use and Personal Trends

When describing intentions for future use and future trends for use of GenAI, participants expressed a spectrum of intentions ranging from enthusiastic adoption to deliberate avoidance. Most respondents anticipated continued or expanded use, while at least one expressed a desire to avoid AI tools entirely. For example, one respondent explained they were moving "toward using AI as a partner in creative and professional work rather than just as a quick productivity tool." Within this spectrum, an overarching trend was the view of GenAI as a collaborative partnership, an evolution from seeing it as a simple productivity tool to recognizing it as a partner in creative and professional work.

Respondents described task-specific adoption patterns that reflected purposeful, strategic use. This included research assistance, writing support, data analysis, and administrative tasks like activity tracking and planning. Several noted using AI for "tedious tasks" and "busy work," suggesting strategic deployment for efficiency rather than for core learning activities. Language refinement and communication enhancement appeared frequently, with multiple respondents using GenAI to improve "wording," "professional language," and "communications." This suggests GenAI serves as a writing assistant, helping students achieve professional-grade expression. One respondent referred to using AI as a "brainstorm tool when I need the extra push" highlighting its role in conceptualization. Respondents also expressed anticipation of expanding capabilities, especially in multimedia creation, with one noting they expected increased use of "image or video generation as it gets better."

Respondents highlighted professional and pedagogical applications noting that GenAI was already supporting accreditation documentation, instructional activity development, lesson planning, and career preparation. One respondent described using GenAI for "addressing and documenting professional standards," illustrating how they leveraged AI for professional tasks requiring precision. Others mentioned applications related to enhancing classroom practice and one noted using it to prepare for a STEM related job.

A pattern of boundary consciousness emerged, with one respondent explicitly stating, "I don't want AI to speak, think, or take over for me. I see it as a supportive tool, not as a replacement." At the same time, professional integration was seen as increasingly necessary with another respondent noting that "if you're not using AI, you're slowly falling behind." These

perspectives suggest that GenAI literacy is becoming perceived as essential for career competitiveness and productivity, even as students remain committed to maintaining human agency.

Finally, participants described personal and daily-life applications, including routine use of voice assistants for information needs, budgeting and vacation planning. The ubiquity of GenAI was evident with one respondent observing that it is now "available in almost everything online," which suggests a trend in adoption being partially driven by built-in integration, rather than deliberate choice. Collectively, these accounts indicate that students expect to use GenAI across the multiple life domains of work, school, and personal contexts, and that adoption often follows a progression from simple queries in daily life to complex academic and professional collaborations.

Discussion

This study explored graduate students' awareness, uses, perceptions, and future intentions regarding GenAI in the context of taking one or more educational technology courses at a southwest borderland university. The findings revealed enthusiasm for GenAI use across their life domains, tempered by significant concerns. Students recognized GenAI as valuable for productivity, creativity, and professional preparation, yet consistently emphasized boundaries, ethical concerns, and the need for institutional guidance. Three key thematic trends emerged from the results of this study: (1) promise, productivity, and partnership; (2) boundaries and ethics; and (3) navigating uncertainty. To frame these trends, we draw upon the four initial research questions alongside our complementary frameworks of Connectivism (Siemens, 2005; Downes, 2008; Goldie, 2016) and the Concerns-Based Adoption Model's (CBAM) Seven Stages of Concern (Hall & Hord, 2015). For this study, Connectivism highlights the networked dimensions of how students are adopting GenAI as a node within their evolving knowledge ecosystems, while the CBAM Stages of Concern captures the affective and developmental dimensions of how students feel about and make meaning of that adoption.

Promise, Productivity, and Partnership

Students who began with limited prior exposure to GenAI, as noted in the results, have, through their coursework, developed current practices that span a productivity spectrum and are looking ahead to future applications. The findings indicate that graduate students perceived GenAI as part of a promising evolving trajectory from basic productivity tool to collaborative partner. Within this broader trajectory, students in our study described GenAI use ranging from simple tasks (e.g., simple queries, activity tracking) to complex professional applications (e.g., accreditation documentation, lesson planning, and career preparation).

Across this spectrum, students consistently framed GenAI as a collaborative partnership. For example, one respondent explicitly described moving "toward using AI as a partner in creative and professional work rather than just as a productivity tool," highlighting a shift from instrumental use to partnership-oriented adoption. This notion goes beyond productivity; it represents a fundamental shift in their relationship with GenAI, positioning GenAI not only as a

tool for efficiency but also as a supportive partner in students' professional and academic networks. From a connectivism perspective, this illustrated how learners were expanding their knowledge ecosystems to include GenAI as a non-human node that contributed to problem-solving, brainstorming, and meaning making.

These findings addressed both current practices (RQ1) and forward-looking intentions (RQ4); and they aligned with research describing GenAI as a form of intelligence augmentation rather than a replacement (Jarrahi, 2018) as well with recent work showing that students strategically deployed AI for simpler productivity tasks to free their time for higher order thinking (Yilmaz & Yilmaz, 2023; Gerlich, 2025; Lee et al., 2025). Students looked forward to anticipated improvements with GenAI, as expected for example, in multimedia creation. Further, students perceived GenAI literacy as increasingly necessary for professional competitiveness and as part of an inevitable collective trend of experimentation across disciplines.

Boundaries and Ethics

While the results highlighted students' recognition of GenAI's productivity and learning benefits, they also revealed persistent concerns that tempered this enthusiasm. The second research question (RQ2) asked how graduate students perceived the benefits and challenges of GenAI in academic and teaching contexts. Alongside enthusiasm, students voiced substantial concerns, especially around academic integrity (83.3% of respondents), plagiarism, and skill atrophy. They worried that over-reliance on GenAI, with it "doing the work," could reduce critical thinking and authentic learning experiences. They also identified challenges of accuracy and bias, citing hallucinations and the need for verification. These concerns revealed the emergence of critical AI literacy, where students not only used AI but interrogated its limitations.

The concern about job displacement emerged with particular poignancy among graduate students who serve as teaching assistants. They occupy a dual position as both learners and emerging professionals in the same academic ecosystem where displacement anxieties are rising. As one respondent noted, the fear extends beyond academic integrity to fundamental questions about professional futures and elimination of jobs. This aligns with Capano, He, and McMinn's (2025) findings about graduate students' dual vulnerability as both learners and workers in the academic ecosystem.

One particularly important outcome of this study is the articulation of boundary consciousness: "I don't want AI to speak, think, or take over for me. I see it as a supportive tool, not as a replacement." This emphasis on augmentation rather than substitution echoes existing research (Chan & Tsai, 2023; Dégallier-Rochat et al., 2022) and underscores a key implication of RQ2- that GenAI should augment, not replace, classroom learning and teaching, with educators remaining central to humanizing education.

From a CBAM perspective, these responses reflect overlapping stages of concern: consequence-level concerns in recognizing risks to integrity, equity, and quality and refocusing-level concerns in imagining expanded uses such as multimedia creation. Unlike linear adoption models, our findings begin to show that students inhabit multiple stages simultaneously, negotiating enthusiasm and hesitation in parallel. The continuum between caution and curiosity

suggests that GenAI usage is a negotiation in which students grapple with what it means to think, create, and integrate GenAI in an academic landscape. In this way, CBAM helps illuminate not only how GenAI is adopted but also how to make meaning of its role in shaping identities as learners, researchers, and educators.

Navigating Uncertainty

While the third research question (RQ3) asked what institutional policies, practices, and guidance shape student use of GenAI, the findings also intersect with broader concerns from RQ1, RQ2, and RQ4. Students described uncertainty not only at the institutional level, but also in relation to emerging adoption trends across fields, epistemic reliability, and equitable access to future opportunities.

At the institutional level (RQ3), only 22.2% of students felt their university had provided adequate guidance, leaving them to operate in what one described as a "gray area." Policies were typically communicated at the syllabus level and varied widely between courses, creating inconsistent experiences. This was particularly concerning given students' reliance on GenAI for high-stakes tasks such as professional documentation. At the disciplinary level (RQ1), students observed wide variation in how GenAI is approached. An art educator critiqued AI's creative limitation, a healthcare professional described cautious experimentation with diagnostic applications, and all educators voiced plagiarism concerns. These differences highlight the need for discipline-sensitive approaches rather than one-size-fits-all policies.

Students also grappled with epistemic uncertainty (RQ2), noting hallucinations, bias, and misinformation as ever-present risks. This added a layer of complexity wherein AI was seen as ubiquitous and "available in almost everything online," its reliability remained contested and uncertain. Finally, equity concerns (RQ4) underscored uncertainty in access. Some respondents worried that socioeconomic disparities could widen as wealthier students accessed premium tools and training while others were left behind, creating a different type of digital divide. These concerns echo anxieties not only about present inequities but also about the trajectory of GenAI adoption in all contexts.

Collectively, these findings suggest that uncertainty is not limited to institutional policy (RQ3) but extends across adoption trends (RQ1), perceived challenges (RQ2), and future outlooks (RQ4). From a connectivism perspective, students are actively negotiating the boundaries of their knowledge networks and selectively integrating GenAI nodes while simultaneously evaluating, critiquing and bounding their use. This selective integration reflects what Siemens (2005) described as the capacity to recognize when to act on current information, a skill that is particularly complex when the nodes themselves are contested, inequitable in access, and epistemically unstable.

From a CBAM Stages of Concern perspective, these overlapping uncertainties reflect management-level concerns about how to use GenAI responsibly and consequence-level concerns about its broader impact on learning, equity and professional futures. Notably, rather than stalling adoption, these concerns appear to be generative, supporting students with the development of personal frameworks for responsible use even in the absence of institutional clarity, suggesting movement through iterative cycles of evaluation that do not map neatly with

the CBAM Seven Stages of Concern. This finding reinforces the value of CBAM's Seven Stages of Concern not as a prescriptive ladder but as a diagnostic lens for understanding the complexity of adoption in rapidly evolving technological contexts.

The findings suggest that these graduate students are not simply passive recipients of technology policy; rather they are active participants in shaping their own GenAI practices with critical intentionality as they navigate institutional, disciplinary, and epistemic uncertainties of an emerging technological landscape.

Conclusions

Taken together, the findings of this study demonstrate that graduate students are navigating GenAI adoption with a balance of promise, productivity, and partnership. They are strategically deploying AI tools for efficiency and professional applications while simultaneously redefining their relationship to the technology through a lens of collaborative partnership. This perspective frames GenAI not only as a tool that augments productivity but as a supportive element across students' networks, tempered by a strong sense of boundary consciousness that emphasizes human agency and ethical responsibility. These students remain critically aware of risks to integrity, equity, and learning quality, and they encounter uncertainty at epistemic, access, and institutional levels. Their adoption patterns reflect a nuanced and layered approach where enthusiasm and hesitation coexist, shaped as much by context as individual choice.

Connectivism helps explain how students integrate GenAI as part of their distributed learning networks, while CBAM Stages of Concern highlight the overlapping concerns that shape and complicate this adoption process. Together, these frameworks reveal that adoption is less linear than traditional models predict, characterized instead by multidimensional concerns, iterative experimentation, and discipline-specific variations.

The implications for higher education are significant—educators and institutions need to move beyond "ChatGPT 101" toward a comprehensive AI literacy and fluency that centers productivity, partnership, and ethical responsibility. Institutional policies must provide clear and equitable guidance across disciplines and ensure equitable access, positioning GenAI as an augmenting presence rather than a replacement. As one of the authors says to her classes, "If the robots take over, shame on us. We did not do what it takes to humanize education." Ultimately, human relationships, critical thinking, and authentic intellectual engagement remain central to academic and professional growth.

Future research should continue to examine GenAI use across institutional types, degree levels, and cultural contexts to better understand how emerging forms of AI literacy are cultivated and sustained. Given the localized scope of this study and the evolving nature of GenAI integration, additional work is needed to evaluate how well current adoption models including the conceptual shifts within frameworks like CBAM's Seven Stages of Concern (e.g., the revision from "awareness" to "unconcerned"), account for the non-linear, rapidly shifting dynamics of GenAI use. Further research should also explore how institutional policy, instructional design, and equitable access shape learners' developing competencies, particularly in contexts that differ from those represented in the present study.

Declarations

Ethics Statement

This study was conducted in accordance with recognized ethical standards. Informed consent was obtained from all participants, and data were collected and reported with respect for confidentiality and anonymity.

The study protocol was reviewed and approved by the Institutional Review Board of New Mexico State University (#2502169200, 05/14/2025) for studies involving humans.

Informed consent was obtained from all subjects involved in the study.

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AI Use Statement

This paper was reviewed and refined with the assistance of OpenAI's GPT-4 and Anthropic's Claude, complementing the human editorial process. OpenAI's GPT-4 assisted with qualitative data analysis and earlier stages of drafting and editorial review. Anthropic's Claude assisted with final editorial refinement, sentence-level revision, and collaborative theoretical discussion related to the manuscript's conceptual framing. All AI-assisted content was reviewed, evaluated, and approved by the human authors, who take full responsibility for the accuracy, originality, and integrity of the manuscript.

Conflicts of Interest Statement

The authors declare no conflicts of interest related to the research, authorship, or publication of this article.

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Appendix A
Survey Instrument

Domain 1: What is/are your current role/s? (Check all that apply)

1. Graduate Student
2. Preservice Teacher
3. Inservice Teacher
4. Community College Faculty Member
5. K12 Teacher
6. University Faculty Member
7. Other

Domain 2: Prior Exposure and Program Context

- Prior to taking course/s from an online educational technology program, what was your experience with GenAI-related topics?
- Upon taking course/s from an online educational technology program that includes AI or GenAI-related topics, what do you remember about any AI or GenAI activities?

Domain 3: Awareness and Usage of GenAI

- Are you familiar with any of the following GenAI tools (list of 12 common tools provided and other option)? (Check all that apply)
- Please share which tools you are most familiar with and how you are using them
- How often do you use GenAI tools in your academic or professional practice? (Daily, Weekly, Occasionally, Never)
- For what purposes have you used GenAI tools (list of purposes provided and other option)? (Check all that apply)
- Do you have any intentions for future use of any of these or other GenAI tools and/or strategies?
- Is there anything these questions prompted you to think about and share that we did not ask in this section about tools and strategies?

Domain 4: Perceptions of and Attitudes Towards GenAI

- In your opinion, how helpful are GenAI tools in your learning or teaching practice? (Not helpful, slightly, moderately, very, extremely)
- Do you agree with the following statements?
  (e.g., confidence, productivity, originality/creativity, academic integrity, institutional guidance)

Domain 5: Future Outlook in Regard to GenAI

- What potential benefits do you see in integrating GenAI into higher education?
- What challenges or concerns do you associate with the use of GenAI in academic settings?
- What, if any, trends in the use of GenAI do you see in your environment and/or field?
- What policies or practices (if any) does your institution have regarding the use of AI tools?
- As you move forward with your life, how do you see yourself using AI tools? What is trending for you?

Appendix B

Table 1

Alignment of Research Questions and Survey Domains

Research Question (RQ)	Survey Domain	Example Items
RQ1. What are the current trends in graduate students' awareness, experiences, and use of GenAI in academic and professional contexts?	Demographic and Professional Background	What is/are your current role/s?
	Prior Exposure and Program Context	Prior to taking course(s) … what was your experience with GenAI-related topics?
	Awareness and Usage of GenAI	Are you familiar with any of the following GenAI tools? How often do you use them? For what purposes?
RQ2. How do graduate students perceive the benefits, challenges, and ethical boundaries of integrating GenAI into their learning and teaching practices?	Perceptions of and Attitudes Towards GenAI	In your opinion, how helpful are GenAI tools in your learning or teaching? To what extent do you agree with the following statements …?
RQ3. What institutional policies, practices, and guidance shape graduate students' use of GenAI?	**Future Outlook** (Policy-related items)	What policies or practices (if any) does your institution have regarding the use of AI tools?
RQ4. What future intentions and outlooks do graduate students hold for the role of GenAI in their academic, professional, and personal lives?	**Future Outlook** (Intention-related items)	As you move forward with your life, how do you see yourself using AI tools? What, if any, trends in the use of GenAI are you seeing in your environment or field?