Exploring Generational Perspectives on AI Use in Higher Education: A Theory

Jiomarie B. Jesus
Mandaue City College, Philippines
jiomarie.jesus@mandauecitycollege.com

Genessa Basilisco
Cebu Technological University – Consolacion Campus, Philippines
basiliscogenessa143@gmail.com

Khay-c G. Gemodo
University of Southern Philippines Foundation, Philippines
kgemodo@uspf.edu.ph

Gloria E. Espiloy
University of Southern Philippines Foundation, Philippines
gespiloy@uspf.edu.ph

Cheryl M. Lucero
University of Southern Philippines Foundation, Philippines
clucero@uspf.edu.ph

Jeffy M. Sumilhig
Cebu Technological University – Consolacion Campus, Philippines
dynamic.jeffy@gmail.com

Abstract
As artificial intelligence (AI) continues to reshape higher education, this study examines how generational identity influences the adoption and ethical engagement with AI technologies, addressing a gap in mainstream models that often overlook socio-generational dynamics. Using a qualitative grounded theory approach, data were collected from ten purposively selected informants representing Gen Z, Millennials, Gen X, and Baby Boomers across higher education institutions in Metro Cebu. Semi-structured interviews were analyzed through open, axial, and selective coding, supported by constant comparative analysis. The study developed the Generationally Mediated AI Adoption Theory (GMAIAT) following this process. This context-sensitive framework integrates behavioral constructs from the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Theory of Planned Behavior (TPB) with generational worldviews, institutional support, and ethical dispositions. GMAIAT comprises four interrelated domains: Generational Attitudes toward AI, Institutional Support and Ethics, Generational Mediation Cycle, and Cross-Generational Innovation. These domains explain how AI adoption is shaped by cohort-specific digital fluency, peer learning networks, institutional scaffolding, and shared ethical practices. The study positions generational identity as an active mediating construct rather than a passive demographic category. Findings contribute both theoretical advancement and practical insights for inclusive, ethical, and generation-responsive AI integration. Implications include curriculum reforms, faculty training, and intergenerational engagement initiatives. The model also informs broader digital literacy and technology governance efforts, particularly in emerging regional contexts such as ASEAN, where addressing generational gaps is essential for equitable and sustainable AI adoption in education.

Keywords: Generational perspectives, artificial intelligence in higher education, technology adoption theory

1. Introduction

Artificial Intelligence (AI) is significantly transforming the way students access, process, and create knowledge within higher education. The widespread adoption of generative AI tools, such as ChatGPT, Grammarly, and AI-integrated learning management systems, has brought academic institutions to a critical crossroads. This shift presents opportunities for enhanced efficiency while also introducing ethical, pedagogical, and cultural challenges (Batista, Mesquita, & Carnaz, 2024). Although recent research has examined AI's effects on curriculum development, academic honesty, and institutional governance, limited focus has been placed on how generational identity influences the perception, use, and ethical interpretation of AI in educational settings (Sharma, 2024; Ivanov et al., 2024). Digital natives, particularly Generation Z, often engage with AI tools intuitively, framing them as enablers of productivity and creativity. In contrast, digital migrants such as Generation X and Baby Boomers tend to approach AI with caution, often raising concerns about authorship, data privacy, and the potential erosion of traditional pedagogical values (Summers et al., 2024). These generational divergences, if overlooked, may exacerbate gaps in AI literacy, reinforce digital inequality, and hinder the inclusive adoption of educational technologies. As Sharma (2024) contends, intergenerational dynamics must be treated not as peripheral frictions but as strategic entry points for sustainable AI integration.

Mainstream technology acceptance models, such as the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Theory of Planned Behavior (TPB), offer foundational insights into behavioral intention and system use. However, these models typically conceptualize users as homogeneous actors, insufficiently accounting for socio-cultural and generational variables that critically influence technology engagement in real-world academic settings. Specifically, they tend to under-theorize the role of cohort-based digital fluency, emotional narratives, and institutional scaffolding—factors that shape not only access to but also ethical positioning toward AI. Furthermore, UTAUT's focus on constructs like performance expectancy and social influence, and TPB's emphasis on attitude and perceived control, lack the interpretive depth needed to explain age-based differences in digital ethics, trust, and peer-mediated behaviors. This theoretical gap calls for a more nuanced, generationally attuned framework. This study directly addresses that lacuna by proposing the Generationally Mediated AI Adoption Theory (GMAIAT), a conceptual framework built inductively from qualitative data and grounded in the lived experiences of students, faculty, and institutional staff. Using a grounded theory approach, the study investigates how four generational cohorts interpret, adopt, and negotiate AI tools within higher education settings. The resulting theory situates generational identity as a central mediator, rather than a background demographic, in shaping inclusive, ethical, and contextually embedded approaches to AI integration. The research is situated in Metro Cebu, one of the Philippines' most dynamic urban-academic centers, where a confluence of public and private institutions is actively experimenting with AI-enhanced education. The region represents a critical nexus for generational and technological convergence, with its growing population of digitally fluent students, seasoned educators, and technology integration specialists. Metro Cebu's diverse institutional landscape and ongoing digital transformation make it a strategically appropriate site for examining how AI adoption is culturally and generationally mediated in emerging academic contexts.

2. Research Objectives

This study critically investigates the generational perspectives on the adoption of Artificial Intelligence (AI) in higher education, with a focus on how different age groups perceive, experience, and respond to AI technologies within academic environments. Anchored in the

Unified Theory of Acceptance and Use of Technology (UTAUT) and the Theory of Planned Behavior (TPB), this research seeks to uncover the behavioral, cognitive, and contextual factors that shape AI use across generational cohorts. Through a qualitative exploration of lived experiences, the study aims not only to examine the psychological, social, and structural enablers and barriers to AI adoption but also to contribute to theory development by integrating established models with generational insights. By synthesizing empirical findings into a conceptual framework, the study aspires to advance a generationally informed theory of AI adoption in higher education. To achieve this, the research is structured around three core domains of inquiry:

1. Explore how students from different generational cohorts perceive and experience AI use in higher education environments;
2. Investigate the cognitive, social, and infrastructural factors that shape AI adoption behavior, guided by the UTAUT and TPB constructs; and
3. Develop a generationally grounded theoretical framework that explains inclusive and effective AI adoption in academic institutions.

3. Literature Review

Artificial Intelligence (AI) integration in higher education has largely been examined through established theoretical lenses, including the Diffusion of Innovation (DOI), the Technology Acceptance Model (TAM), and the Unified Theory of Acceptance and Use of Technology (UTAUT). While these frameworks provide foundational insights into the behavioral drivers of technology use, they tend to conceptualize adoption as a linear, rational, and predominantly individualistic process, overlooking the generational, socio-cultural, and institutional nuances that influence AI engagement in real-world academic settings. For instance, UTAUT and its extended models (e.g., UTAUT2) rely on core constructs such as performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh et al., 2003). Although these constructs are useful for predicting general technology adoption, they assume a homogeneous user base, thus failing to account for inter-cohort variability in digital fluency, ethical reasoning, and learning styles. Similarly, TPB's constructs—attitude toward behavior, subjective norms, and perceived behavioral control—offer a psychosocial explanation of intention, but they insufficiently capture how these intentions are filtered through generational experiences, emotional orientations, and peer learning structures. Recent empirical studies have challenged the one-size-fits-all assumption in these models. For example, Jain and Raghuram (2024) and Papathomas et al. (2025) found that older users place greater emphasis on institutional preparedness and digital ethics, whereas younger cohorts prioritize usability and creativity. These findings reveal that generational identity functions not just as a background demographic but as a mediating variable that shapes how AI tools are evaluated, trusted, and integrated.

Moreover, qualitative studies (e.g., Summers et al., 2024) highlight that older faculty may perceive generative AI as a threat to pedagogical integrity, while younger students embrace it as a natural extension of their cognitive workflows. Such perspectives cannot be adequately captured by UTAUT or TPB, both of which lack the conceptual bandwidth to analyze ethical tensions, cultural memory, or intergenerational knowledge exchange. To address these theoretical deficiencies, this study introduces the Generationally Mediated AI Adoption Theory (GMAIAT)—a grounded, empirically developed framework that repositions generational identity as a central mediating construct in AI adoption. GMAIAT integrates behavioral insights from UTAUT and TPB but reinterprets them through a generational lens. It emphasizes how cohort-specific values, institutional scaffolding, peer influence, and digital culture intersect to shape not only whether AI is adopted, but also how and why it is adopted in ethically divergent

ways. By offering a more contextually grounded, ethically sensitive, and generationally nuanced model, GMAIAT moves beyond predictive modeling and contributes to theory-building grounded in actual educational experiences. It responds directly to calls by Duah et al. (2024) and Chan & Lee (2023) for frameworks that recognize the cultural, emotional, and structural layers mediating AI use in education. As such, GMAIAT offers not only explanatory depth but also practical relevance for institutions navigating the complexities of inclusive and responsible AI integration.

The comparative table below clarifies how GMAIAT builds upon and extends existing theoretical models:

Theoretical Construct	UTAUT / TPB	Limitation	GMAIAT Contribution
User Conceptualization	Homogeneous, individual	Ignores cohort-based digital behaviors	Recognizes generational identity as a mediating factor
Ethical Dimension	Minimal focus	Underexplored in decision-making	Integrates age-based ethical concerns and AI boundaries
Social Influence	Modeled as static peer pressure	Lacks peer learning context	Incorporates informal peer networks and digital ecosystems
Institutional Role	Treated as an external "facilitating condition"	Not deeply analyzed	Embedded in institutional ethics, support systems, and policy gaps
Adoption Process	Rational, utility-driven	Assumes linearity	Reframed as socially and culturally negotiated, especially across age groups

4. Methodology

Design

This study employed a qualitative grounded theory methodology to investigate how generational identity mediates the adoption and ethical engagement with artificial intelligence (AI) in higher education. The goal was to construct a context-sensitive theory rooted in the lived experiences of students, faculty, and institutional staff across multiple generational cohorts. Rather than testing pre-existing models, this approach allowed for the inductive development of the Generationally Mediated AI Adoption Theory (GMAIAT) through iterative engagement with empirical data. The research followed the classical grounded theory stages: theoretical sampling, open coding, axial coding, and selective coding, supported by constant comparative analysis. The design enabled the abstraction of theoretical categories that emerged directly from participant narratives, ensuring analytic depth and grounding in educational realities. Reflexive memos were written throughout to capture evolving insights and guide theoretical sensitivity.

Environment

The study was conducted across public and private higher education institutions in Metro Cebu, Philippines, a region known for its technological progress, academic diversity, and urban dynamism. Metro Cebu offers an ideal case setting due to its coexistence of digitally fluent student populations and experienced academic staff, allowing for natural generational intersections. The presence of AI in administrative and instructional functions across institutions provided a rich backdrop for analyzing adoption behaviors mediated by age, digital culture, and organizational context.

Key Informants

A total of ten key informants were selected through purposive and theoretical sampling to ensure maximum variation across generational cohorts (Gen Z, Millennials, Gen X, and Baby Boomers), institutional affiliations, and academic roles. While the total number of informants was ten, this sample size aligns with grounded theory methodology, which prioritizes conceptual depth over breadth (Charmaz, 2014; Squire et al., 2024). Theoretical saturation was reached by the final interviews, with no new categories or conceptual properties emerging. The informants were deliberately selected through theoretical and maximum variation sampling, ensuring cross-cohort, cross-role, and cross-institutional representation. Thus, the robustness of the resulting theory—GMAIAT—rests on the diversity of perspectives, the saturation of emergent themes, and the rigorous coding and memoing procedures, rather than the sample size alone. Initial participants were chosen based on diverse AI usage experiences, and subsequent selection was guided by theoretical sampling to refine and saturate emerging categories—saturation being defined as the point at which no new themes or properties appeared in the data. The final sample included four Gen Z undergraduate students who actively used AI tools such as ChatGPT, Grammarly, Canva AI, and GitHub Copilot; two Millennials, comprising a graduate student and a faculty member integrating AI into media and communication instruction; two representatives from Gen X and the Baby Boomer cohort, both of whom were senior academic leaders (e.g., department chair and college dean) offering administrative and pedagogical insights; and two institutional technology facilitators, including a learning management system (LMS) administrator and a university librarian involved in campus-wide AI system deployment. While a detailed respondent profile table would typically be appended to enhance transparency, in alignment with the Consolidated Criteria for Reporting Qualitative Research (COREQ), the researcher has instead integrated this information narratively within the text due to journal formatting constraints.

Data Analysis

Data analysis followed a grounded theory approach using a three-phase coding process—open coding, axial coding, and selective coding—with the support of NVivo software to enhance analytical rigor and data management. During open coding, initial line-by-line analysis was conducted to identify recurring concepts, actions, and meanings from the transcripts. Axial coding was then used to group and connect these codes across cases, revealing patterns related to generational contrasts, institutional influences, and behavioral tendencies. In the final stage of selective coding, the core phenomenon—generationally mediated AI adoption—was developed by integrating the categories into four conceptual domains, which collectively formed the basis for the Generationally Mediated AI Adoption Theory (GMAIAT). A codebook matrix was maintained to track code development, thematic relationships, and coding frequency, with NVivo facilitating transparent documentation and dynamic querying of the dataset. Although manual interpretive analysis remained central to theory building, the use of NVivo ensured consistency, traceability, and methodological transparency. Constant comparative analysis and reflexive memoing were applied throughout to preserve theoretical sensitivity and enhance analytical depth. To ensure trustworthiness, the data were triangulated across generational cohorts and institutional functions, and findings were further validated through regular peer debriefing sessions to mitigate potential researcher bias.

Ethical Consideration

Ethical approval was obtained from the institutional Research Ethics Committee, and all procedures complied with international standards for research involving human participants. Informed consent was secured before data collection, detailing the study's purpose, voluntary participation, right to withdraw, and data confidentiality. Participants were anonymized using pseudonyms, and all transcripts and recordings were stored in encrypted, password-protected

files. Given the topic's sensitivity, particularly surrounding academic honesty and digital ethics, special care was taken to create a judgment-free space, allowing participants to speak openly about their AI use and perceptions.

5. Results and Discussion
5.1 Results 5.2 Discussion
Theme 1: Generational Attitudes toward AI

This theme captures the cognitive, ethical, and emotional orientations of different cohorts toward AI use. It is closely aligned with the "Generational Attitudes toward AI" domain of GMAIAT. These attitudes are shaped not only by age-related digital exposure but also by differing values around autonomy, academic integrity, and the role of technology in learning. Understanding these generational dispositions is crucial to identifying the sources of resistance or enthusiasm that influence AI integration in academic settings.

Sub-theme 1: Openness and skepticism across age groups

Younger participants tended to embrace AI as part of their academic routines, while older participants expressed hesitancy, often raising ethical concerns or questioning reliability. Informant 4 noted:

> *"We see it as an enabler, not a threat. Older generations might see it as replacing teachers, but we see it as extending our teaching capacity."*

According to Nurhas et al. (2023), a crucial dynamic in intergenerational innovation is reflected in the openness of different generations to AI. This is because younger users' digital fluency and optimism frequently contrast with older generations' cautious approach, which is influenced by deeper concerns about ethical implications and well-being. Addressing these generational gaps is necessary to position teachers as agents of educational transformation, as highlighted by Brown et al. (2023). This will enable all educators to critically engage with AI as a transformative and culturally sensitive tool in academic settings.

Sub-theme 2: Initial impressions and evolving trust in AI tools

Participants described mixed initial reactions—ranging from awe to doubt—when first using AI tools like ChatGPT or Grammarly. However, over time, frequent users reported developing selective trust in AI's capabilities, especially in writing and summarization tasks. Informant 3 explained:

> *"At first, I thought it was cheating. But when I started using it just for brainstorming or rewording things I already wrote, it felt more okay."*

Early impressions of AI tools frequently mirror Elbow's (2022) concerns about the blurred boundaries separating assistance from cheating, particularly in writing environments where students struggle with problems with integrity and authorship. Similar to this, Corbin et al. (2025) draw attention to the uncertainty around what constitutes appropriate AI use, arguing that growing confidence in these technologies is influenced by both functionality and the requirement for more precise institutional frameworks surrounding ethical bounds in evaluation.

Theme 2: Digital Practices and Peer Influence

This theme explains how generational differences manifest through informal digital learning behaviors. It informs the "Generational Mediation Cycle" domain of GMAIAT. Particularly

among Gen Z and Millennial generations, participants' digital behavior revealed a tendency toward self-motivated discovery and social sharing. In addition to formal education, informal peer networks and individual experimentation contributed a significant part to the adoption of AI tools.

Sub-theme 1: Self-directed exploration and usage habits

Many participants reported discovering and trying AI tools independently. They often used platforms like ChatGPT or Grammarly without formal training, driven by curiosity or academic needs. Informant 2 shared:

> "I didn't wait for anyone to teach me. I just tried different AI tools and stuck with what worked best for my classes."

According to Khan's (2024) vision of a learner-driven educational revolution, where students' curiosity and autonomy determine their engagement with emerging technology, younger participants' self-directed study of AI tools is in line with this. This change is further supported by Bozkurt et al. (2023), who point out that generative AI encourages exploratory and speculative learning practices, allowing people to create individualized learning pathways outside of conventional instructional frameworks.

Sub-theme 2: Peer-driven adoption and tool-sharing behaviors

Participants consistently emphasized the role of peer networks in promoting AI adoption. Group chats, online forums, and class discussions were common sources of AI tool recommendations. Informant 1 mentioned:

> "Most of the tools I use now came from my classmates. Someone tries something, and the next day we're all using it."

The relevance of collaborative and socially embedded learning environments, where students co-construct technological fluency through shared experiences, is reflected in the peer-driven adoption of AI tools (Hamilton, 2022). Peer networks are essential to normalizing and accelerating the use of AI in academic routines, as demonstrated by Turkle's (2023) concept of the "tethered self," which further demonstrates how digital connectedness fosters constant engagement and impact.

Theme 3: Institutional Support and Ethical Considerations

This theme maps directly onto the "Institutional Support and Ethics" domain of GMAIAT, highlighting how formal structures shape generational AI behavior. The adoption of AI was found to be significantly influenced by institutional infrastructure and ethical clarity. In addition to expressing worries about the moral implications of utilizing AI in academic settings, participants highlighted that support differed throughout institutions.

Sub-theme 1: Access to AI tools and guidance from institutions

While some institutions had begun integrating AI tools within learning platforms, others lacked official training or policy. Informant 6 explained:

> "We have the tools, but not enough structured training. A lot of faculties learn on their own or rely on student input."

The discrepancy in institutional support reflects Doyle's (2023) focus on the necessity of learner-centered, organized settings where learners and educators are mentored in the effective use of emerging technology. This is further supported by Saroyan & Frenay (2023), who advocate for systemic capacity-building in higher education, emphasizing that AI integration

will remain decentralized and excessively dependent on human initiative in the absence of institutional frameworks and continuous professional development.

Sub-theme 2: Concerns over plagiarism and ethical boundaries

Many participants, especially educators, expressed worries about the overuse of AI in student submissions and blurred lines around authorship. Informant 8 explained:

> *"AI helps, but it's easy for students to rely on it too much. It's not always clear where the human ends and the machine begins."*

AI-driven plagiarism worries are in line with Prashar et al.'s (2024) research on the moral conundrums that students encounter, where awareness campaigns frequently collide with convenience-driven conduct. In the same way, Teel et al. (2023) draw attention to the "ChatGPT conundrum," which confuses the boundaries between academic dishonesty and aid. They urge institutions to reevaluate authorship and ethical limits in the generative AI era.

Theme 4: Conceptual Foundations for AI Adoption

This theme corresponds to the "Cross-Generational Innovation" domain of GMAIAT, which reframes generational differences as opportunities for collaborative growth. Participants contributed ideas that laid the groundwork for building a generationally informed theory of AI adoption. These insights reflect shared needs and evolving learning environments shaped by AI.

Sub-theme 1: Cross-generational needs and shared learning spaces

Respondents highlighted the importance of bridging generational gaps through collaborative learning and dialogue. Informant 10 stated:

> *"Faculty need just as much AI training as students. We should be learning from each other, not separately."*

According to McGrath et al. (2023), establishing AI's position in higher education, especially across generational boundaries, requires educators to have a shared sense of responsibility. In the same way, Lee & Perret (2022) suggest that inclusive, cross-generational learning environments are necessary for successful AI integration, where experienced and novice educators work together to develop shared competency and self-assurance in AI literacy.

Sub-theme 2: AI as a facilitator of academic adaptation and innovation

AI was frequently described as a tool that transforms, not replaces, academic work. Its use fosters efficiency, creativity, and new educational norms. Informant 7 discussed:

> *"I don't see AI replacing us. I see it evolving how we work, especially in research and instruction."*

According to Chan & Tsi (2024), generative AI is increasingly viewed by educators and students as a helpful tool that enhances teaching and learning processes rather than as a replacement. Furthermore, according to Haroud & Saqri (2025), AI can transform educational methods, simplifying assignments, encouraging creativity, and opening up new possibilities for collaboration and digital literacy in higher education. This is how AI can support academic innovation.

Derived Hypotheses

H1: *Generational identity significantly influences attitudes toward AI in higher education.*
Younger participants viewed AI as a valuable extension of their learning, while older participants approached it cautiously, often raising ethical concerns. Informant 4 shared, *"We*

see it as an enabler, not a threat. Older generations might see it as replacing teachers, but we see it as extending our teaching capacity." This divergence supports the notion that generational identity is not just a demographic factor but a key mediator shaping how AI is perceived, integrated, and ethically framed within higher education settings.

H2: *Institutional support and ethical guidelines positively predict responsible AI use across generations.*

Variations in institutional readiness affected both confidence and responsible engagement with AI. Informant 6 remarked, *"We have the tools, but not enough structured training. A lot of faculties learn on their own or rely on student input."* Where institutions offered clear training and policy, participants—regardless of age—showed higher trust and ethical discipline in AI use, underscoring the importance of structured support systems.

H3: *Peer-driven networks mediate the relationship between generational identity and AI adoption.*

Younger cohorts often acted as early adopters, influencing others through shared discovery and demonstration. Informant 1 explained, *"Most of the tools I use now came from my classmates. Someone tries something, and the next day we're all using it."* This social diffusion mechanism highlights the power of peer networks in accelerating adoption across generational boundaries.

H4: *Cross-generational collaboration initiatives enhance AI adoption efficacy.*

When participants engaged in shared learning spaces, adoption rates and ethical understanding improved across cohorts. Informant 10 emphasized, *"Faculty need just as much AI training as students. We should be learning from each other, not separately."* These collaborations break down generational silos and enable mutual adaptation to emerging technologies.

P5: *Ethical concerns are distributed unevenly across generations, influencing adoption patterns.*

Older cohorts prioritized academic integrity, while younger cohorts emphasized AI's potential to enhance productivity and creativity. Informant 4 highlighted, *"Older generations might see it as replacing teachers, but we see it as extending our teaching capacity."* This reinforces the proposition that generationally embedded ethics shape both the pace and manner of AI adoption in higher education.

Derived Proposition

P1: *Generational identity functions as an active mediating construct shaping AI adoption.*

The lived experiences of participants revealed that adoption patterns were intertwined with generationally embedded values and digital upbringing. Informant 3 reflected, *"At first, I thought it was cheating. But when I started using it just for brainstorming or rewording things I already wrote, it felt more okay."* This evolution in perception shows that generational worldview influences not only the decision to adopt AI but also the ethical boundaries participants draw in its use.

P2: *Institutional scaffolding determines the extent to which generational gaps in AI adoption are bridged.*

Participants in well-supported environments described AI use as guided, consistent, and collaborative, while those in less prepared institutions experienced fragmented and uneven adoption. Informant 8 noted, *"It's not always clear where the human ends and the machine begins."* This uncertainty underscores the role of institutional structures in fostering clarity, shared norms, and intergenerational trust in AI integration.

P3: *Informal peer-learning ecosystems accelerate AI adoption across age groups.*

Beyond formal training, tool recommendations and demonstrations emerged from organic student–student and student–faculty exchanges. Informant 2 stated, *"I didn't wait for anyone to*

teach me. I just tried different AI tools and stuck with what worked best for my classes." This behavior illustrates how informal networks complement formal instruction in embedding AI use into daily academic practices.

P4: *Cross-generational engagement transforms adoption from isolated to collective innovation.*

Participants who engaged in intergenerational mentorship described a more cohesive and ethically aligned approach to AI use. Informant 7 remarked, *"I don't see AI replacing us. I see it evolving how we work, especially in research and instruction."* This shift indicates that cross-generational dialogue not only improves adoption but also co-creates digital norms.

P5: *Ethical concerns are distributed unevenly across generations, influencing adoption patterns.*

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Theory Generated
The adoption, interpretation, and ethical application of artificial intelligence in higher education are influenced by age-based generational identity, as explained by the Generationally Mediated AI Adoption Theory (GMAIAT). Based on practical observations of students, teachers, and institutional facilitators, the theory combines generational viewpoints with behavioral characteristics from TPB and UTAUT to explain a range of AI engagement patterns. Although the theory was developed from a purposive sample of ten informants, the participants represented diverse generational cohorts, academic roles, and multiple institutions across Metro Cebu. Theoretical saturation was achieved, ensuring conceptual adequacy consistent with grounded theory methodology. According to GMAIAT, generational mediation provides an important lens through which to view adoption patterns as well as the institutional, cultural, and cognitive factors that influence AI integration in academic settings.
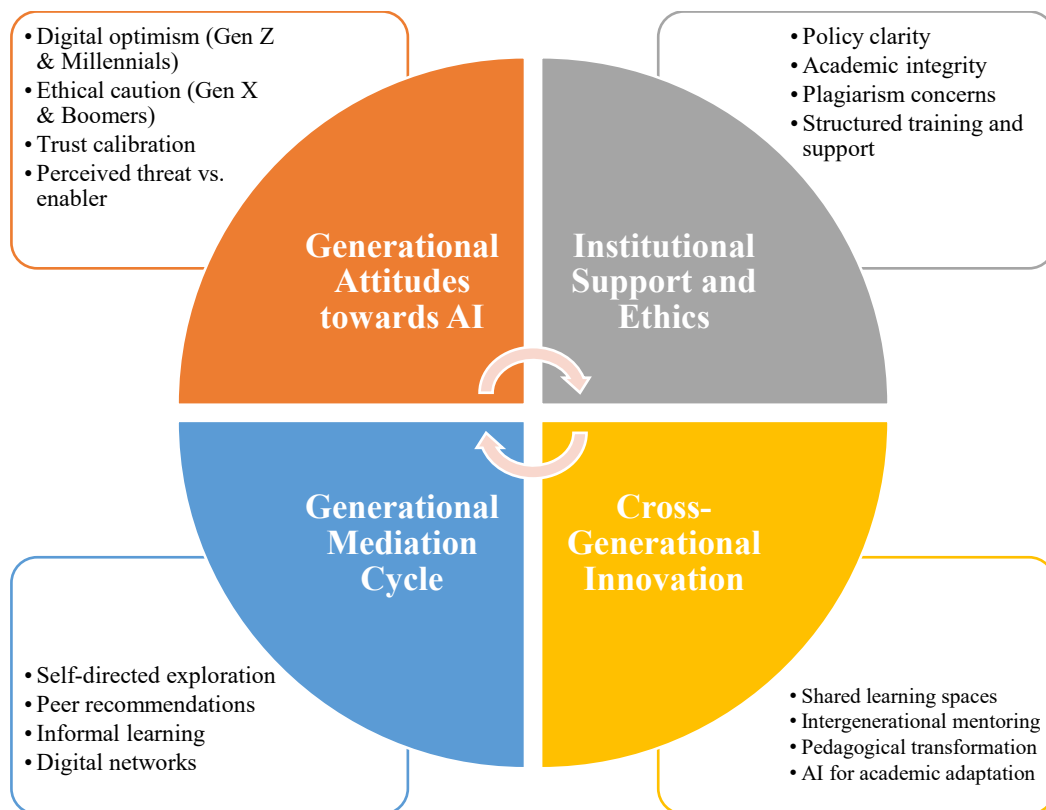
Generational Attitudes towards AI

- Digital optimism (Gen Z & Millennials)
- Ethical caution (Gen X & Boomers)
- Trust calibration
- Perceived threat vs. enabler

Institutional Support and Ethics

- Policy clarity
- Academic integrity
- Plagiarism concerns
- Structured training and support

Generational Mediation Cycle

- Self-directed exploration
- Peer recommendations
- Informal learning
- Digital networks

Cross-Generational Innovation

- Shared learning spaces
- Intergenerational mentoring
- Pedagogical transformation
- AI for academic adaptation

Figure 1: Generationally Mediated AI Adoption Theory (GMAIAT)

Building upon the thematic findings, the Generationally Mediated AI Adoption Theory (GMAIAT) was developed through the abstraction of patterns that consistently emerged across generational cohorts, institutional contexts, and behavioral orientations. While grounded in participant narratives, GMAIAT represents a theoretical leap from descriptive themes to an integrative explanatory model of how generational identity mediates AI adoption in higher education. Although grounded theory does not require large samples, the ten informants provided a conceptually rich and diverse dataset. Saturation was reached, and the emergent theory reflects the depth and variation necessary to support a robust, empirically grounded conceptual model (Charmaz, 2014; Squire et al., 2024). This theory posits that AI adoption is not a uniform behavioral process governed solely by individual intention, as suggested by mainstream models like the Unified Theory of Acceptance and Use of Technology (UTAUT) and the Theory of Planned Behavior (TPB). Rather, it is a socially constructed, generationally conditioned, and institutionally shaped phenomenon. GMAIAT reconceptualizes key elements of UTAUT and TPB by embedding them within four interrelated domains, each representing a key mediating structure in the adoption process:

1. *Generational Attitudes toward AI (Upper-Left Quadrant)*. This domain extends TPB's concept of attitude toward behavior by incorporating cohort-based ethical framing, emotional disposition, and cultural familiarity with technology. Unlike TPB, which treats attitude as individually formed, GMAIAT situates it within generational worldviews shaped by digital upbringing and exposure to prior technological transitions. It also critiques UTAUT's treatment of performance expectancy as static, showing that perceived usefulness varies significantly across generational lines based on trust, skepticism, and pedagogical concerns.

2. *Institutional Support and Ethics (Upper-Right Quadrant)*. This domain reinterprets UTAUT's facilitating conditions and TPB's perceived behavioral control by highlighting the asymmetry of institutional support, policy presence, and ethical guidance. GMAIAT contends that structural readiness is not just a backdrop for adoption but a determinant of ethical engagement, especially when support varies across departments or staff roles. It argues that adoption cannot be isolated from how institutions scaffold digital transitions—or fail to do so.

3. *Generational Mediation Cycle (Lower-Left Quadrant)*. Expanding UTAUT's concept of social influence, this domain emphasizes that peer-driven knowledge transmission and informal learning networks are central to adoption, particularly among younger cohorts. It highlights the asymmetrical influence Gen Z and Millennials have on other cohorts through digital experimentation and community-based learning. Where UTAUT assumes social influence to be passive or linear, GMAIAT sees it as reciprocal and dynamic, embedded in generational digital ecosystems.

4. *Cross-Generational Innovation (Lower-Right Quadrant)*. This domain introduces a new construct not present in UTAUT or TPB: collaborative potential across generations. It positions generational diversity as a strategic asset in ethical and inclusive AI integration. Through mechanisms like intergenerational mentorship and co-creation of digital norms, this domain reflects a shift from isolated adoption toward shared digital transformation. It aligns with contemporary calls for equity and inclusion in edtech implementation.

The Generationally Mediated AI Adoption Theory (GMAIAT) presents a multidimensional alternative to traditional technology adoption models by addressing four key theoretical gaps. First, it shifts from treating users as a homogeneous group to recognizing generational specificity, positioning generational identity as a dynamic mediating variable that influences attitudes, trust, and ethical interpretations of AI. Second, it moves from a notion of linear adoption to one of social mediation, highlighting that AI engagement is often peer-influenced, network-driven, and shaped by informal learning ecosystems, especially among younger cohorts. Third, it reconceptualizes infrastructure not as a passive backdrop, but as an active structure of ethical and institutional support that conditions the legitimacy and quality of AI use. Finally, it shifts from viewing technology use as a matter of individual adaptation to framing it as a process of collective innovation, emphasizing the transformative potential of cross-generational collaboration in shaping inclusive and sustainable digital practices. Grounded in empirical data yet theoretically generative, GMAIAT enriches our understanding of how sociocultural, institutional, and generational dynamics converge in AI integration. It offers higher education stakeholders—educators, administrators, and policymakers—a strategic, context-sensitive framework for designing inclusive, ethical, and generation-responsive approaches to educational technology adoption.

6. Conclusion

This study introduced the Generationally Mediated AI Adoption Theory (GMAIAT) to explain how generational identity mediates the adoption, interpretation, and ethical engagement with artificial intelligence (AI) in higher education. Developed through grounded theory analysis of lived experiences from students, faculty, and institutional staff in Metro Cebu, GMAIAT integrates generational perspectives with established behavioral models such as UTAUT and TPB, while advancing a more context-sensitive, socially embedded, and ethically aware framework. The findings underscore that AI adoption is not solely shaped by access or individual intention but is deeply influenced by generational worldviews, institutional scaffolding, and peer-mediated behaviors. The theory emerged from four thematic domains: generational attitudes toward AI, digital practices and peer influence, institutional support and ethical considerations, and cross-generational innovation, each offering insight into how

different cohorts respond to emerging technologies. GMAIAT contributes to theory-building by repositioning generational identity as an active mediating construct rather than a background demographic, thus advancing a more holistic understanding of technology integration. Beyond its theoretical implications, the study offers practical relevance for higher education stakeholders. Institutions can use GMAIAT to inform the design of age-responsive curriculum reforms, faculty development programs, and ethically grounded digital policies. At a macro level, the findings contribute to regional digital transformation discourse, especially in ASEAN and other emerging contexts, where intergenerational digital divides persist. Policymakers and educational leaders may use this framework to guide inclusive AI strategies, equitable digital literacy programs, and cross-generational mentorship models that ensure sustainable and ethical integration of AI in academic ecosystems. Future research should extend GMAIAT to multi-country comparisons, national policy frameworks, and cross-sectoral education systems to further refine its generalizability and impact.

7. Recommendations

In light of the findings and the development of the Generationally Mediated AI Adoption Theory (GMAIAT), it is strongly recommended that higher education institutions adopt a differentiated, generation-responsive strategy in integrating AI tools across academic environments. Institutions should establish structured faculty development programs that include AI literacy, ethical training, and intergenerational dialogue to ensure that both digital natives and digital migrants can collaboratively engage with emerging technologies. Curriculum designers are encouraged to embed AI applications into coursework in ways that align with diverse generational learning styles and ethical concerns, ensuring equitable access and fostering shared digital responsibility. Furthermore, policymakers and institutional leaders should prioritize the development of clear, context-specific guidelines on AI use, authorship, and academic integrity, while promoting cross-generational mentorship initiatives that position students and faculty as co-learners in the digital transformation journey. At a regional level, especially within ASEAN, collaborative policy frameworks should be established to bridge digital divides and facilitate sustainable AI integration, with attention to generational dynamics, technological infrastructure, and institutional capacity-building. Future research should expand the GMAIAT framework through longitudinal studies, interdisciplinary applications, and cross-cultural validation to enhance its theoretical robustness and practical relevance across educational contexts.

8. Limitations of the Study

This study is subject to several limitations and delimitations, which should be considered in interpreting its findings. One limitation pertains to the relatively small and region-specific sample size—ten key informants drawn from higher education institutions within Metro Cebu. While participants represented a range of generational cohorts and institutional roles, the specificity of the setting may limit the generalizability of findings to broader national or international educational contexts. Institutional structures, technological readiness, and AI policies in other regions may produce different adoption patterns. A second limitation involves the use of purely qualitative methods. Although grounded theory allowed for deep exploration of participant experiences, the reliance on subjective narratives introduces potential biases, including interpretive subjectivity and social desirability. Quantitative or mixed-method approaches could enhance future studies by validating the GMAIAT framework across larger samples or with predictive modeling. The following are better categorized as delimitations, reflecting intentional design choices: First, the study focused primarily on social science and liberal arts participants, thereby excluding views from technical or STEM-related disciplines where AI integration may follow different trajectories. Second, intergenerational dynamics

were explored across institutions rather than within the same organizational context, thus limiting insights into intra-institutional power relations or collaborative processes. Third, while generational identity was the central analytic lens, other intersecting demographic factors such as gender, socioeconomic status, or digital access were not systematically examined.

Additionally, the study represents a snapshot in time. As AI technologies and institutional responses continue to evolve rapidly, the generational perceptions captured here may shift, requiring future longitudinal tracking. The absence of a formal policy analysis is also noted; while participants referenced institutional support, no systematic comparison of AI-related policies was conducted, which could have added depth to the institutional analysis. Lastly, while generational cohorts were clearly defined for analytic purposes, digital behaviors often overlap between adjacent generations (e.g., younger Gen X and older Millennials), suggesting that age alone may not fully account for behavioral variance. Thus, GMAIAT should be understood as a context-sensitive conceptual model, adaptable rather than prescriptive. Future research should aim to validate and extend the framework using broader demographic samples, disciplinary variety, and longitudinal or cross-cultural methods to assess its robustness and scalability.

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