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College Students on Generative A.I.: Basis for Ethical Generative A.I. Utilization Policy

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Abstract
The rapid emergence of generative artificial intelligence (AI) has significantly transformed higher education, providing innovative tools for enhanced learning and scholarly practices while also raising ethical concerns. The study examines college students' perceptions of generative AI in education, highlighting the need for ethical utilization policies. Generative AI transforms learning by offering personalized experiences and enhancing research skills while posing ethical challenges, such as threats to academic integrity and potential biases. The study aims to understand student perceptions, assess their knowledge and willingness to use AI and develop policies for responsible AI usage in higher education. The research employs a descriptive quantitative design, gathering data from students across various departments in a Philippine Catholic institution. It identifies trends in AI tool usage, with ChatGPT and Canva being frequently used, indicating a shift towards multimodal learning. However, ethical guidelines are emphasized due to concerns about privacy, plagiarism, and the risk of fostering over-reliance on AI. The theoretical framework incorporates the Technology Acceptance Model and Cognitive Load Theory to explore students' engagement with AI tools, recognizing both the potential for enhanced learning and the need for balanced cognitive load management. The findings reveal a moderate awareness of AI's limitations and ethical concerns, such as biases and misinformation, suggesting that educational policies should address these issues. Additionally, students demonstrate a strong consensus on the necessity of ethical guidelines regarding transparency and accountability, indicative of a demand for enhanced media literacy and AI detection training. The study proposes institutional policy recommendations, including AI literacy workshops, curriculum integration, and the establishment of an ethical generative AI framework, underscoring the importance of interdisciplinary collaboration in addressing concerns while maximizing the benefits of AI in educational contexts.
Keywords: *Generative AI, ethical policies, higher education, student perceptions, academic integrity, personalized learning, interdisciplinary collaboration.*

1.0 INTRODUCTION

Generative AI in education has transformed traditional learning by personalizing experiences, improving research skills, and encouraging creativity while accommodating various academic tasks. College students generally view generative AI in a positive light, acknowledging its potential to provide customized learning materials and support for activities like brainstorming and research (Chan & Hu, 2023; Wang, 2024). AI-powered platforms assess student data to create personalized educational experiences, and intelligent tutoring systems offer specific feedback, which boosts engagement and motivation (Sheikh, 2024; Meehir, 2023; Rizvi, 2023). However, the ethical implications, such as threats to academic integrity and worries about critical thinking, are considerable as AI tools evolve (Center for Teaching Excellence, 2023; Chan & Hu, 2023). Research shows potential plagiarism issues, and over-reliance on AI could hinder intellectual growth. Additional challenges include data privacy and biases (Li, 2023). The investigation of generative AI within the context of higher education in the Philippines seeks to assist policymakers in promoting responsible usage by exploring student perceptions, advantages, challenges, and ethical issues related to these AI technologies (Fabro et al., 2024; Giray et al., 2024).

OBJECTIVES

The objectives of this research are the following:

1. to determine the demographic profile of the respondents in terms of:
1. college department, and;
2. total generative AI tools used;
2. to assess the level of knowledge of higher education students regarding generative AI technologies;
3. to evaluate their willingness to use these technologies in their academic and professional endeavor;
4. to identify the concerns they have associated with the use of generative AI;
5. to test the significant difference between the following:

1. college department and level of knowledge, willingness to use, and concerns;
2. total generative AI tools used and level of knowledge, willingness to use, and concerns;
6. to test the significant relationship between the following:
1. college department and level of knowledge, willingness to use, and concerns;
2. total generative AI tools used and level of knowledge, willingness to use, and concerns;
7. to develop a suggested comprehensive institutional policy that ensures the responsible and ethical use of generative AI tools in higher education.

LITERATURE REVIEW

Introduction to Generative AI in Higher Education

Generative Artificial Intelligence (GAI) is transforming higher education by revolutionizing teaching methods, increasing student engagement, and influencing institutional policies through the use of deep learning algorithms that produce content mimicking human creativity (Lawton, 2023; Ebert & Louridas, 2023; Fan et al., 2023). GAI enhances education by creating personalized learning materials, simplifying administrative tasks, and enabling student interaction on innovative platforms (Kaledio et al., 2024). Incorporating GAI allows educators to provide tailored resources, fostering active learning and improved outcomes (Moorhouse et al., 2023). It automates content creation, adapts learning, and offers real-time feedback, enhancing engagement (Zhu et al., 2023; Johnston et al., 2024) while reducing administrative duties, allowing focus on student engagement (Darling-Hammond et al., 2020; Chan, 2023).

The Impact of Generative AI on Teaching and Learning

Generative AI technologies revolutionize education by customizing learning experiences to individual student needs, enhancing engagement, and improving outcomes (Xu, 2024). By creating individualized learning paths, students can delve deeper into subjects at their own pace, demonstrating AI's capacity to fine-tune education (Walter, 2024). Despite these benefits, challenges such as authenticity and information quality persist (Carstens et al., 2021). AI tools offer real-time adaptability, aiding in comprehending complex topics and supporting research through hypothesis generation and data analysis (Rincon-Flores et al., 2024; Hodges & Ocak, 2023). They streamline tasks like grading, allowing educators to focus on student interaction, thus enhancing retention and achievement (Gray & Diloreto, 2017; Tong et al., 2022).

Student Perceptions of Generative AI

Arowosegbe et al. (2024) observe that 56% of students view generative AI positively for academic purposes, although ethical concerns necessitate policies for responsible use. Baidoo-Anu et al. (2024) report that UK students use generative AI to sharpen learning strategies and critical thinking, with AI fostering inquiry-based learning by facilitating information analysis and synthesis (Wang et al., 2024). Al Shloul et al. (2024) stress the importance of media literacy education to enhance critical evaluation of AI content. Such education allows students to refine arguments and consider multiple perspectives, ultimately improving higher-order thinking and reflective skills (Ali et al., 2024).

Ethical Concerns Regarding Generative AI

Establishing ethical guidelines for generative AI is crucial to mitigate risks such as data privacy violations and academic dishonesty (Kisselburgh & Beever, 2022; Wilkes, 2024). These technologies can boost engagement but raise challenges, including concerns over authorship and intellectual property due to potential plagiarism and copyright issues (Zhai et al., 2024; Michel-Villarreal et al., 2023). AI's ability to create content indistinguishable from human work and the rise of deepfakes present additional risks of misinformation (Federis & Associates Intellectual Property Firm, 2013; Pawelec, 2022). Privacy concerns underscore the need for compliance with regulations to protect user data and ensure informed consent (Baig, 2023).

Frameworks for Ethical Usage

The challenges that generative AI presents regarding moral accountability, especially in education, highlight the urgent need for ethical frameworks that guide developers, users, and policymakers. As more college students turn to generative AI because of its easy access, having ethical guidelines becomes essential to prevent misuse, like academic dishonesty, and to address the issue of undetected AI-generated content (Kurtz et al., 2024), thus the importance of understanding the "responsibility gap" and assigning accountability for adverse outcomes (Santoni de Sio & Mecacci, 2021). Well-structured ethical guidelines can help create an accountable AI ecosystem, ensuring fairness and responsible use of technology while empowering students to use AI positively. Maintaining transparency when implementing GAI tools is

vital, with a strong push for integrating ethical considerations into educational policies (Miao et al., 2023). Developing a standard framework can safeguard educators and students, encouraging innovative yet ethical approaches to academic practices.

THEORETICAL FRAMEWORK

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) played a key role in understanding how people view and adopt new technologies, including generative AI tools, in educational settings. Davis (1989), as cited by Lu et al. (2024), pointed out that perceived usefulness and ease of use are critical factors for user acceptance. Recent research has utilized TAM to investigate how students accept generative AI in educational contexts, revealing that perceived ease of use significantly impacts student engagement with AI tools. Additionally, positive perceptions of AI functionality are linked to increased usage for assessing college students' readiness to engage with AI technologies and evaluating how generative AI can improve education and professional growth.

Cognitive Load Theory

Cognitive Load Theory (CLT) by Sweller (1988), cited by Asma and Dallel in 2020, provided valuable insights into how generative AI influences students' learning experiences. This theory highlights the importance of how information is presented, as it can significantly affect cognitive load during the learning process, given the limitations of working memory. Yatani et al. (2024) indicated that while generative AI can help reduce unnecessary cognitive load by tailoring learning materials to individual needs, there is a potential risk of becoming overly dependent on it, which could impede critical thinking and a deeper understanding of the material. Balancing cognitive load when incorporating generative AI into educational settings is essential to improve learning outcomes effectively.

Constructivist Learning Theory

Constructivist Learning Theory highlights learners building knowledge actively by interacting with their surroundings. This prioritized active learning through significant experiences and interactions (Guo et al., 2024), shifting from a model of passive knowledge delivery to one of active participation in higher education. Generative AI can enhance constructivist teaching methods by providing personalized feedback and resources that meet individual needs, promoting collaborative learning and innovative problem-solving (Xu, 2024). This improves students' educational experiences, boosts engagement and motivation, and aids knowledge retention. Generative AI facilitates active learning to develop relevant skills and empowers students throughout their educational journey.

CONCEPTUAL FRAMEWORK

The study focused on generative AI (Gen AI) utilization in higher education, emphasizing students' awareness, interest, and ethical considerations. Key findings illustrate the importance of students' existing knowledge and experiences in effectively leveraging Gen AI tools for learning (Giannakos et al., 2024). While students acknowledge the benefits of tools like ChatGPT and LinerAI, they necessitate reliable guidance on their ethical application (Collins et al., 2021). The research indicates a positive inclination towards incorporating Gen AI in academics, but concerns about dishonesty and misuse remain (Rodway & Schepman, 2023). The framework further explores accuracy, transparency, and ethics issues in Gen AI usage, noting the risks of dependency and task oversimplification (Chan & Hu, 2023; Zhai et al., 2024). Concerns about career impacts and AI-influenced decision-making are raised, prompting a call for policies founded on academic integrity to ensure fair access and responsible usage of Gen AI (Johnston et al., 2024). The study recommends comprehensive training and continuous policy updates in collaboration with policymakers to enhance educational practices and equip students with skills for navigating the evolving AI environment.

2.0 METHODOLOGY

2.1 RESEARCH DESIGN

This study employed a descriptive quantitative research design. This methodology enables the systematic collection and analysis of numerical data, providing statistical insights into students' perceptions, knowledge levels, willingness to utilize generative AI, and associated concerns. The structured nature of quantitative methods allows for identifying trends and relationships among the variables under investigation. Recent studies in higher education have shown that descriptive quantitative approaches

effectively capture students' attitudes and experiences regarding new technologies, providing a solid foundation for policy formulation (Tong et al., 2022).

2.2 RESEARCH LOCALE

This research aimed to assess the level of perception of higher education students toward generative AI, highlighting the ethical considerations that should guide its utilization. The study was conducted at a Catholic institution in the Philippines, which comprises five departments: the College of Teacher Education, College of Business Administration, College of Accountancy, College of Nursing, and College of Arts and Sciences. This study aims to encompass a diverse number of students enrolled in five distinct departments. The selection of this institution is significant, as it seeks to capture a broad spectrum of perceptions across various academic fields, facilitating an inclusive understanding of generative AI's implications in higher education. Generative AI represents a transformative technology that has gained educational momentum (UNESCO, 2023). Students generally expressed a positive attitude towards generative AI, recognizing its potential benefits while highlighting ethical usage and academic integrity concerns.

2.3 SAMPLING

A stratified random sampling method was utilized to reflect the diverse nature of the population, consisting of 1,487 students from five distinct departments: the College of Teacher Education, College of Business Administration, College of Accountancy, College of Nursing, and College of Arts and Sciences. A target sample size of 305 students, calculated using Raosoft.com, was established to enable statistical analysis and ensure representativeness across various student groups, offering findings pertinent to the broader educational context. This involved dividing the population into strata or subgroups based on similar characteristics, with random samples drawn from each group, ensuring that significant subgroups are adequately represented. This approach enhanced the reliability and validity of the findings, allowing for a thorough understanding of the different students' perceptions of generative AI.

2.4 INSTRUMENT

The instrument utilized for this study was a structured questionnaire designed to capture higher education students' perceptions regarding Generative A.I. technologies. The questionnaire was adapted based on previous research by Chan and Hu (2023) on educational technologies. It was structured to encourage responses that reflect varied viewpoints regarding GenAI in academic settings.

Furthermore, the survey incorporated a range of question types, including the Knowledge of generative AI technologies wherein questions aimed at gauging the participants' understanding of GenAI technologies, their functionalities, and limitations;

Willingness to use generative AI technologies where the items that measured students' intentions to incorporate GenAI tools in their educational practices and future careers;

Perceived Benefits: Inquiries designed to reveal the advantages students associate with GenAI, such as personalized learning and academic support; and Concerns about generative AI technologies where questions that focused on apprehensions related to GenAI, including ethical issues, privacy concerns, and potential impacts on academic integrity.

2.5 DATA GATHERING PROCEDURE

The research used a descriptive quantitative method to evaluate how higher education students perceive generative AI, which will help us create a policy for its ethical use. Data were gathered through a structured questionnaire, employing both digital methods via Google Forms and traditional pen-and-paper approaches to ensure accessibility for all participants. The questionnaire included structured questions to understand students' perceptions thoroughly. The survey focused on a clustered sample of higher education students from various disciplines representing the demographics (college department and generative AI used). The questionnaire was distributed through paper-and-pen. After collecting the responses, data were analyzed using SPSS Version 27 to quantify perceptions and identify trends to guide the development of guidelines for the ethical use of generative AI in academia.

2.6 STATISTICAL TREATMENT

The study used statistical methods to analyze demographic profiles and utilize Generative AI tools among college students. Percentages were employed to summarize the distribution of participants across college

departments and the specific AI tools they used. They clearly understood departmental engagement trends and facilitated discussions on associated ethical implications. Using mean was crucial in evaluating students' knowledge, willingness to use, and concerns regarding Generative AI technologies. This depicted overall attitudes and understanding among students, forming the basis for analyzing how these factors might influence ethical usage policies. ANOVA (Analysis of Variance) was applied to examine differences in students' perceptions of Generative AI across departments and based on the various AI tools used. This helped identify whether significant differences in perception existed, which was essential for customizing ethical AI usage policies to the unique needs of each academic field. Correlation analysis investigated the relationship between students' perceptions and their college departments and the number of AI tools used. This provided insights into how perceptions varied with departmental backgrounds and the extent of technology use, enabling the development of nuanced ethical policies that reflect students' diverse experiences and engagement levels with generative AI.

2.7 ETHICAL CONSIDERATION

In conducting the research, it is imperative to prioritize ethical considerations to ensure the integrity and responsibility of the study. The ethical considerations included obtaining informed consent from participants, ensuring anonymity and confidentiality to foster a safe environment for sharing honest perceptions, and adhering to institutional guidelines on research ethics. Furthermore, the research will address the implications of generative AI on academic integrity and intellectual property rights while promoting the balanced and responsible use of technology in educational settings. The study aims to understand student perceptions and contribute to a framework that fosters ethical standards and cultivates a nuanced understanding of generative AI within higher education.

3.0 RESULTS AND DISCUSSION

Departments

The data on the college departments revealed a significant interest in generative AI, with the College of Nursing (n = 127) expressing the most interest, indicating a need for ethical guidelines focused on healthcare applications, like patient data privacy. The College of Business Administration (n = 77) and College of Teacher Education (n = 75) also show considerable representation, highlighting AI's role in business decision-making and education. Although representation from the College of Arts and Sciences (n = 15) and College of Accountancy (n = 11) is lower, there is still evident interest in generative AI, signaling the importance of integrating AI tools across diverse fields. This suggests a comprehensive ethical policy tailored to various academic disciplines for generative AI utilization. In nursing, the focus should be on patient confidentiality, while in business, transparency and accountability in AI-driven decisions are vital. The wide applications of generative AI in personalizing learning and streamlining tasks highlight the necessity for interdisciplinary educational approaches to address ethical considerations, as emphasized by Nguyen et al. (2022) and Tilala et al. (2024). Studies by Sollosy and McInerney (2022) emphasize the importance of ethical AI training for business students.

Total Generative AI Tools Used

The data on the total generative AI tools used revealed significant engagement with generative AI tools among college students, with 737 use instances highlighting technology integration in academic contexts. ChatGPT is the most utilized tool (f = 196), indicating its broad applicability in various academic tasks, while Canva is also popular (f = 252), emphasizing its role in visual design projects. Tools like Grammarly (f = 177) are frequently employed to enhance academic writing. In contrast, others, such as Google Gemini (f = 35) and Perplexity AI (f = 26), have moderate usage, and Microsoft Copilot (f = 21) shows limited acceptance, primarily for programming tasks. Tools like QuillBot (f = 18) and DALL·E experience minimal use, suggesting limited alignment with immediate academic needs (Dwivedi et al., 2023; Javaid et al., 2023).

The data suggests that AI literacy varies among students, with frequent users of tools like Grammarly and Canva potentially exhibiting greater academic confidence. Thus, it is crucial to develop collaborative AI utilization policies that leverage technological advances while upholding academic integrity, including creating ethical guidelines, diversifying technology instruction, and fostering environments for experience sharing (Jamaludin & Sedek, 2023; Johnston et al., 2024).

Students' Knowledge of Generative AI Technologies

The data on students' knowledge about generative AI tools demonstrated a moderate comprehension of students with generative AI's limitations, evidenced by their awareness of its challenges in handling complex tasks (mean = 3.54) and ethical issues like biases and unfairness (mean = 3.23). They recognize ethical considerations concerning misinformation, plagiarism, and lack of emotional intelligence in AI (Elali & Rachid, 2023). Concerns about AI potentially undermining analytical skills arise, aligning with observations by Chan and Hu (2023) and Zhai et al. (2024), highlighting the evolving notion of "AI plagiarism" (Dhruv et al., 2024). Educational institutions are thus encouraged to develop robust AI policies to preserve analytical skills within AI-enhanced environments (Al-Zahrani, 2024; Zhai et al., 2024). Overreliance on AI-generated statistics can result in erroneous conclusions, underlining the need to recognize AI biases (Wargo & Anderson, 2021; Varsha, 2023). To address this, there is a call for enhanced educational frameworks that promote fair and inclusive AI practices, ensuring academic integrity in AI utilization (Akgun & Greenhow, 2021; Chan & Hu, 2023).

Student's Willingness to Use Generative AI Technologies

The data on students' willingness to use generative AI tools revealed students' attitudes towards generative AI from a diverse perspective. Students appreciate generative AI's efficiency, particularly in time management for academic tasks (mean = 3.13), and acknowledge its potential to offer new insights and spark creativity (mean = 3.05). However, there is hesitation in integrating these tools into professional settings, with lower scores for professional integration (2.89) and digital competence (2.90), suggesting uncertainty about their role in these areas. This further explores how generative AI can support academic and professional development.

The result showed a mix of optimism and skepticism among students regarding these technologies. Ethical concerns, such as biases and privacy, are essential to address, with instructors playing a critical role in fostering critical thinking and inclusivity. Support from educational institutions is crucial in developing structured frameworks that blend AI-assisted learning with digital literacy. As Kim et al. (2024) and Schiff (2021) noted, colleges should implement AI ethics principles and collaborate with organizations focused on AI education to establish effective policies and guidelines for generative AI utilization.

Students' Concerns About Generative AI Technologies

The data on students' concerns about generative AI tools revealed significant concerns among college students regarding ethical guidelines for generative AI, highlighting a strong preference for responsible AI use in education (mean = 3.44). This emphasis on ethical frameworks aligns with existing research that stresses the importance of ethics in AI applications within educational settings (Chan, 2023; Hodges & Ocak, 2023). The need for effective regulation (mean = 3.36) and issues related to data privacy (mean = 3.31) underline students' worries about data misuse and unauthorized surveillance (Baig, 2023; OVIC, 2018). Concerns about source attribution, trust, and reliability indicate a demand for transparency and accountability in AI-generated content. The urgency for ethical standards is further supported by risks associated with misinformation and academic integrity (Nguyen et al., 2022; Rodway & Schepman, 2023). Students expressed interest in learning AI detection techniques to improve trust and credibility, and enhancing digital literacy could boost their confidence in responsible AI use (Olanipekun, 2024; Grájeda et al., 2023). Collaboration among stakeholders in AI ethics could provide personalized learning experiences while mitigating ethical risks (Fu & Weng, 2024).

Table 1. ANOVA Between Students' Perception on Generative AI Tools and College Departments

		Sum of Squares	df	Mean Square	F	Sig.
Students' Knowledge	Between Groups	3.279	4	.820	4.486	.002
	Within Groups	54.813	300	.183		
	Total	58.092	304			
Students' Willingness to Use	Between Groups	1.163	4	.291	1.282	.277
	Within Groups	68.069	300	.227		
	Total	69.233	304			
Students' Concern	Between Groups	2.191	4	.548	2.604	.036
	Within Groups	63.101	300	.210		

	Total	65.291	304

Table 1 showed ANOVA results demonstrating notable differences in college students' understanding and concerns regarding generative AI tools across departments, suggesting varied levels of education and resources available (F-value = 4.486; p-value = 0.002) (Habib et al., 2023). Despite a consistent willingness to utilize these tools (F-value = 1.282; p-value = 0.277), ethical concerns differ significantly, highlighting the need for more comprehensive education on generative AI ethics (F = 2.604, p = 0.036) (Habib et al., 2023). This underscores the importance of targeted AI education tailored to specific departmental contexts, incorporating ethical considerations into the curriculum to better equip students to address technological and moral challenges. Creativity in AI technologies like ChatGPT and Google Bard is pivotal in problem-solving, emphasizing the need for refining educational practices through case studies, ethical dilemmas, and policy discussions (Rejeb et al., 2024). Such educational enhancements are expected to foster more informed and ethically aware professionals capable of navigating the intricacies of generative AI in various disciplines (Usher & Barak, 2024).

Table 2. ANOVA Between Students' Perception on Generative AI Tools and Total Generative AI Tools Used

		Sum of Squares	df	Mean Square	F	Sig.
Students' Knowledge	Between Groups	4.227	4	1.057	6.002	.000
	Within Groups	58.447	332	.176		
	Total	62.674	336			
Students' Willingness to Use	Between Groups	1.714	4	.428	1.931	.105
	Within Groups	73.656	332	.222		
	Total	75.370	336			
Students' Concern	Between Groups	3.309	4	.827	4.075	.003
	Within Groups	67.396	332	.203		
	Total	70.705	336			

Table 2 revealed significant differences in students' knowledge of generative AI (p-value = .000), indicating a substantial impact from exposure, while their willingness to use these tools shows no significant difference (p-value = .105), suggesting general utility recognition but hesitance in adoption (Chan, 2023; Chan & Hu, 2023; Johnston et al., 2024). Ethical concerns about generative AI varied significantly among groups (p-value = .005), emphasizing the need for educational programs to integrate ethical considerations and develop policies for responsible AI use (Chan, 2023; Chan & Hu, 2023; Johnston et al., 2024). Diverse knowledge levels among students highlight the importance of enhancing curricula and policy frameworks (Chiu, 2024). Students desire strong foundational knowledge to effectively leverage AI applications, suggesting a need for policy overhauls to encourage interdisciplinary learning (Chan & Hu, 2023; Chiu, 2024). Academic institutions play a crucial role in shaping students' understanding of generative AI, necessitating the incorporation of ethical training to meet educational needs and societal technology adoption conversations (Wood & Moss, 2024).

Table 3. Correlation Between Students' Perception on Generative AI Tools and College Departments

		Department	Students' Knowledge	Students' Willingness to Use	Students' Concern
Department	Pearson Correlation	1	.140*	.078	.060
	Sig. (2-tailed)		.014	.173	.294
	N	305	305	305	305
Students' Knowledge	Pearson Correlation	.140*	1	.135*	.512**
	Sig. (2-tailed)	.014		.019	.000
	N	305	305	305	305
Students' Willingness to Use	Pearson Correlation	.078	.135*	1	.358**
	Sig. (2-tailed)	.173	.019		.000

	N	305	305	305	305
Students' Concern	Pearson Correlation	.060	.512**	.358**	1
	Sig. (2-tailed)	.294	.000	.000	
	N	305	305	305	305

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 highlighted key insights into college students' perceptions of generative AI tools. It reveals a significant correlation between students' understanding of generative AI and their college departments (Pearson Correlation = .140, Sig. = .014), suggesting that departmental affiliation influences awareness of these technologies. Conversely, the willingness to use generative AI and concerns about it show weaker correlations with departmental factors, implying other influences, such as personal experience, are at play. The research emphasizes the need for educational policies to integrate generative AI into curricula, enhancing students' technological skills across disciplines (Almufarreh & Arshad, 2023). It suggests that technology-focused departments facilitate greater familiarity with AI tools, while non-technology departments may face educational disparities (Kerimbayev et al., 2023). Challenges in student-centered approaches due to lacking infrastructure are noted, yet incorporating technologies could foster motivation and independence (Chaudhary, 2024). The integration of ethical considerations with practical AI applications is essential, promoting critical thinking and responsible usage, primarily through interdisciplinary courses and workshops that consider diverse perspectives (Gupta & Jaiswal, 2024; Nedungadi et al., 2024), including the Sustainable Development Goals (SDG-4) (Nedungadi et al., 2024).

Table 4. Correlation Between Students' Perception on Generative AI Tools and Total Generative AI Tools Used

		Students' Knowledge	Students' Willingness to Use	Students' Concern	Total Generative AI Tools Used
Students' Knowledge	Pearson Correlation	1	.135*	.512**	.114*
	Sig. (2-tailed)		.019	.000	.046
	N	305	305	305	305
Students' Willingness to Use	Pearson Correlation	.135*	1	.358**	.114*
	Sig. (2-tailed)	.019		.000	.047
	N	305	305	305	305
Students' Concern	Pearson Correlation	.512**	.358**	1	.217**
	Sig. (2-tailed)	.000	.000		.000
	N	305	305	305	305
Total Generative AI Tools Used	Pearson Correlation	.114*	.114*	.217**	1
	Sig. (2-tailed)	.046	.047	.000	
	N	305	305	305	305

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4 examined college students' perceptions and usage of generative AI tools, revealing complex interactions. There is a weak but statistically significant correlation between students' knowledge of generative AI and their use of these tools, with a Pearson correlation coefficient of 0.114 at the 0.05 significance level, indicating that increased understanding may slightly encourage usage (Çela et al., 2024). Similarly, willingness to use these tools correlated at the same level, suggesting openness can enhance engagement. Notably, concerns regarding generative AI exhibited a stronger correlation with usage (0.217, significant at 0.01), suggesting that concerns encourage use as students seek to address their apprehensions (Creely & Blannin, 2024). This study highlights the need for educational policies to

enhance students' understanding and willingness to use AI, addressing ethical considerations such as biases and misinformation, which can increase informed engagement. Such policies can help balance educational benefits with maintaining cognitive skills and address ethical issues like ownership and authenticity (Bozkurt et al., 2024; Filippi et al., 2023).

Suggested Institutional Policy Guidelines for Generative AI Utilization

Suggestions for policies and guidelines highlighted the need for ethical utilization of generative AI in college settings, focusing on enhancing student engagement, curriculum development, and interdisciplinary collaboration. Workshops on generative AI ethics are recommended throughout semesters to improve students' understanding, with success measured by participation and feedback. Faculty and AI experts will collaborate to deliver interactive sessions on AI applications and dilemmas. Integrating AI topics into course materials across departments aims for at least 70% course inclusion, spearheaded by curriculum committees and faculty to enrich education.

Generative AI research grants are proposed to support projects addressing field-specific challenges, assessed by the number of applications and project outcomes, fostering interdisciplinary collaborations. Furthermore, developing an Ethical Generative AI Framework involved creating guidelines for ethical AI use, with stakeholders like faculty and legal advisors crafting guidelines for fair AI tool usage. AI literacy workshops will train students and faculty on effective tool use, measured by attendance and assessment improvements, facilitated by IT and library staff with online resources. Lastly, promoting interdisciplinary projects aimed to boost creativity and critical thinking is evaluated by the number of collaborative projects initiated and completed through faculty and industry partnerships.

4.0 CONCLUSION

The demographic identified specific needs in higher education for disciplines like Nursing and Business Administration, which require tailored ethical guidelines for handling AI-related issues like patient data privacy. The study emphasized the necessity for targeted policies on ethical generative AI use in sectors like Nursing and Business Administration, highlighting the value of interdisciplinary education for ethical AI practices. The underrepresentation of fields such as Arts and Sciences and Accountancy in technology integration suggested a need for inclusiveness to meet evolving workforce demands. Enhancing representation from underrepresented disciplines, such as Arts and Sciences, is essential to address technological and ethical readiness gaps. AI tools like ChatGPT were heavily utilized, indicating a transition towards multimodal learning. Frequently using AI tools indicated a shift toward multimodal learning, necessitating responsible AI tool policies that uphold academic integrity and innovation. However, varying levels of AI literacy highlight the need for policies that promote responsible use while maintaining academic integrity. Students showed moderate awareness of AI technologies, with a mean score of 3.54, and recognized ethical concerns like biases and misinformation. However, there is room for improvement in understanding AI's ethical implications. Optimism existed regarding AI's time-saving benefits, but there is hesitance about its professional use, underscoring a need for policies fostering digital competency. The consensus among students emphasized ethical frameworks and regulatory guidelines, accentuating transparency and data privacy, calling for increased media literacy and AI detection training. Curricula must focus on ethical AI practices, emphasizing the need for awareness of AI limitations, bias, and misinformation and preparing students to tackle AI-related challenges responsibly; despite optimism regarding generative AI's role in enhancing efficiency, concerns about digital competence persist, suggesting a need for comprehensive educational frameworks to navigate AI complexities. This necessitated institutional policy reforms prioritizing ethical considerations and integrating technical knowledge with ethical analysis, as evidenced by the ANOVA results showing varied AI knowledge levels across departments. Moreover, the study advocated ethical AI guidelines emphasizing transparency and data privacy, promoting media literacy, and AI detection training to cultivate critical evaluation skills. Encouraging interdisciplinary approaches will improve AI integration in curricula, fostering dialogue and collaboration to enhance technological competencies and emphasize ethical implications. Proposed frameworks should enhance engagement and integrity through workshops and AI literacy initiatives, promoting responsible generative AI utilization.

5.0 CONTRIBUTIONS OF AUTHORS

Zedric A. Lorzano ´ editing, writing, data analysis, encoding
Lindsey R. Sante, Roserene C. Boragay - editing, writing, supervising

All authors have read and agreed to the published version of the manuscript.

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The authors have no conflict of interest to declare.

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