INSIGHTS-JOURNAL OF
LIFE AND SOCIAL SCIENCES

INSIGHTS-JLSS
Insights-Journal of Life and Social Sciences

THE IMPACT OF ACADEMIC ARTIFICIAL INTELLIGENCE DEPENDENCY ON ACADEMIC INTEGRITY AND SELF - EFFICACY IN RESEARCH STUDENTS

Original Article

Irfana Bibi[1], Haleema Sadia Khan[2]*, Arooba Alam[2], Mahnoor Yaqub Khan[2], Aamina Farooq[2], Hamza Malik[2], Muhammad Abubakar[3], Ameer Hamza[3]

[1]Lecturer, Department of Psychology, University of Mianwali, Mianwali, Pakistan.
[2]BS Scholar, Department of Psychology, University of Mianwali, Mianwali, Pakistan.
[3]PhD Scholar, Department of Psychology, University of Sargodha, Sargodha, Pakistan.

Corresponding Author: Haleema Sadia Khan, BS Scholar, Department of Psychology, University of Mianwali, Mianwali, Pakistan, haleemanasirniazi@gmail.com

Conflict of Interest: None

Grant Support & Financial Support: None

Acknowledgment: The authors extend sincere gratitude to all research participants for their cooperation and valuable time.

ABSTRACT

Background: The expanding integration of Artificial Intelligence (AI) in education has revolutionized academic practices, improving efficiency in research and writing but simultaneously raising concerns about academic integrity and reduced self-efficacy. In developing contexts such as South Asia, where digital literacy and ethical frameworks are still evolving, understanding these dynamics is crucial to ensure that AI complements rather than compromises educational integrity.

Objective: This study aimed to examine the relationship between AI dependency, academic integrity, and self-efficacy among research students, while identifying gender-based and demographic variations influencing these variables.

Methods: A quantitative cross-sectional study was conducted among 302 actively enrolled research students aged 18–50 years, selected through purposive sampling. Data were collected via three standardized instruments: the Students' AI Dependency Questionnaire (α = .89–.91), McCabe/ICAI Academic Misconduct Inventory (α = .90), and the Academic Self-Efficacy Scale (α = .87). Descriptive statistics, Pearson correlation, linear regression, and independent t-tests were applied using SPSS v27 to assess associations and group differences at a significance level of $p < 0.05$.

Results: The mean AI dependency score was 91.24 (SD = 16.4), academic integrity 33.66 (SD = 13.82), and self-efficacy 40.67 (SD = 8.63). AI dependency positively predicted academic misconduct (β = .14, p = .019, R^2 = .42). Academic integrity was negatively correlated with self-efficacy (r = –.20, $p < .01$) but positively correlated with AI dependency (r = .14, $p < .05$). Male students showed higher AI dependency (M = 94.68 ± 19.22) than females (M = 89.70 ± 14.22, p = .032).

Conclusion: Findings indicate that increased reliance on AI tools may enhance confidence yet elevate risks of academic misconduct, highlighting a paradox between technological competence and ethical vulnerability. Strengthened AI literacy and institutional ethics policies are vital to promote balanced, responsible AI use and preserve academic integrity.

Keywords: Academic integrity, Artificial Intelligence, Ethical decision-making, Gender differences, Self-efficacy, Social cognitive theory, Technology use.

INTRODUCTION

The rapid integration of artificial intelligence (AI) into higher education has transformed learning, research, and academic practices. AI technologies now perform complex cognitive tasks such as learning, adapting, and self-correction, thereby merging digital, biological, and physical domains (1). While these tools have enhanced access to knowledge, improved productivity, and promoted personalized learning experiences, their unregulated use has raised serious concerns regarding academic integrity and self-efficacy (2). Recent literature underscores that although AI support can improve students' confidence and performance in difficult academic tasks (3), excessive dependence on AI tools may erode critical thinking, self-reliance, and creativity (4). Such dependence not only limits engagement and originality but also increases the risk of unintentional plagiarism and unethical academic behavior (5). Within educational frameworks, self-efficacy—the belief in one's ability to execute academic tasks successfully—is considered a key determinant of academic performance and integrity (6). According to Social Cognitive Theory (7), students with strong self-efficacy are more resilient, persistent, and ethically conscious, whereas those with weaker self-beliefs are more susceptible to academic misconduct. The Technology Acceptance Model (8) explains that students' perception of AI's usefulness and ease of use often drives their reliance on it, creating a paradox where the same technology that facilitates learning may simultaneously undermine intellectual autonomy. Studies reveal that while AI tools initially enhance learners' confidence, persistent use can gradually weaken cognitive independence, reduce problem-solving capacity, and diminish critical analysis skills (9,10). Globally, universities in technologically advanced regions have developed ethical frameworks and policies to regulate AI usage in academia (11). Conversely, developing nations face challenges such as inadequate digital literacy, limited access to formal research training, and lack of regulatory oversight, which amplify the risk of AI misuse (12). Empirical evidence from South and Southeast Asia, including the Philippines and Pakistan, indicates growing dependence on AI among research students, often without sufficient ethical awareness or institutional guidance (13). This imbalance between accessibility and ethical competence highlights a critical gap in responsible AI integration within academic environments. Furthermore, cognitive offloading—where individuals delegate mental tasks to external systems—while easing workload, may impair long-term knowledge retention and the development of analytical reasoning (14).

Academic integrity, which embodies honesty, trust, fairness, and responsibility, is increasingly challenged by the sophistication of AI-generated content (15). More than one-third of students worldwide have admitted using AI outputs without proper acknowledgment, demonstrating how blurred the boundary between legitimate assistance and academic dishonesty has become (16). Although institutions emphasize originality and ethical referencing, the humanlike fluency of AI writing makes detection and accountability difficult (17). The problem is particularly acute in low-resource educational systems, where students may unintentionally engage in misconduct due to limited understanding of academic ethics and AI literacy (18). This emerging paradigm demands a deeper exploration of how reliance on AI affects students' academic integrity and research self-efficacy. Understanding these relationships is vital for developing informed educational policies that balance innovation with ethical responsibility. By integrating insights from Social Cognitive Theory, the Technology Acceptance Model, and Ethical Decision-Making Theory, this study seeks to examine the extent to which AI dependency influences students' adherence to academic integrity and their confidence in conducting independent research. The research further aims to identify demographic and contextual factors that mediate this relationship, offering a framework for promoting responsible AI use and safeguarding academic values. Ultimately, the objective of this study is to investigate the association between research students' AI dependency, self-efficacy, and academic integrity, and to propose strategies that encourage ethical and autonomous learning in the era of intelligent technology.

METHODS

The present study employed a quantitative, cross-sectional research design to examine the relationship between academic artificial intelligence (AI) dependency, self-efficacy, and academic integrity among actively enrolled research students. This methodological approach allowed for the simultaneous assessment of multiple variables within a defined population, enabling a snapshot of associations between AI reliance, ethical behavior, and confidence in research performance. Participants were selected through purposive sampling to ensure that only individuals meeting specific inclusion criteria were recruited. Data were collected online using a structured Google Form distributed among research students from various universities. The inclusion criteria comprised actively enrolled research students pursuing Bachelor's (7th–8th semesters), Master's (MS/MPhil), or PhD degrees, as well as individuals currently engaged in research-related activities. Exclusion criteria included college and school students, those not currently enrolled due to academic probation or dismissal, and individuals with severe mental health conditions that could impair participation. The final sample consisted of 302

participants aged 18–50 years, including 78 males (25.8%) and 224 females (74.2%), all of whom voluntarily consented to participate. Data were gathered using three standardized and validated instruments. The Students' AI Dependency Questionnaire (14) assessed the degree of reliance on AI in reading, writing, and numeracy-related academic tasks. This 33-item scale demonstrated excellent reliability with Cronbach's alpha ranging from 0.89 to 0.91, ensuring consistency and construct validity for educational research. The McCabe/ICAI Academic Misconduct Inventory (MIAMI) (15) measured academic integrity across three domains—collusion, misuse of resources, and contract cheating. Comprising 17 items, the instrument has been widely used to evaluate moral attitudes, peer norms, and institutional integrity climates. The Academic Self-Efficacy (ASE) Scale (16), consisting of 8 items with a Cronbach's alpha of 0.81, was employed to assess students' confidence in their academic abilities, including time management, note-taking, exam preparation, and comprehension.

A demographic information sheet was included to collect participants' personal and contextual data such as gender, age, education level, socioeconomic and employment status, marital status, region, number of dependents, and course information. Contact details were optional. Participants were assured of the confidentiality and anonymity of their responses and were instructed to answer honestly. Data collection was conducted after obtaining approval from the institutional ethical review committee. Ethical principles were strictly observed throughout the study. Written informed consent was obtained electronically from each participant, who was informed of the study's objectives, voluntary nature, and their right to withdraw at any stage without penalty. Privacy and data protection protocols were maintained, and all responses were stored securely for research purposes only. The data were analyzed using the Statistical Package for the Social Sciences (SPSS) version 27. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were used to summarize demographic characteristics and scale scores. Reliability analyses confirmed internal consistency across all instruments. Inferential analyses were performed to examine relationships and differences among variables. Pearson's product-moment correlation coefficient was computed to determine the association between AI dependency, academic integrity, and self-efficacy. Independent sample t-tests were used to compare mean differences across gender groups. Linear regression analysis was further applied to explore the predictive relationship of AI dependency on academic integrity and self-efficacy. All analyses were conducted at a 95% confidence interval, with a p-value <0.05 considered statistically significant. Throughout the research process, transparency, accuracy, and ethical responsibility were maintained. Participants' cooperation and understanding were acknowledged, and all procedures adhered to international ethical standards for human research. The methodological rigor ensured that findings were credible, reproducible, and relevant for educational and psychological research contexts.

RESULTS

The study included 302 research students aged 18–50 years, with a majority of female participants (73.8%) and 25.5% males. Most respondents were single (87.1%), while 12.3% were married and 0.7% divorced. The predominant age group was 18–29 years (92.1%), followed by 30–39 years (5.0%) and 40–50 years (3.0%). More than half of the participants resided in urban areas (54.6%), while 45.4% were from rural settings. In terms of education, 74.5% were pursuing or had completed bachelor's degrees, 17.9% held MS or MPhil qualifications, and 7.6% were PhD scholars. The sample was primarily composed of students from social sciences (73.8%), whereas 26.2% represented pure sciences. Descriptive analyses revealed moderate use of AI tools across academic domains. The mean score for Reading AI was 28.12 (SD = 4.80, $\alpha = .826$), for Writing AI was 31.47 (SD = 5.50, $\alpha = .880$), and for Numeric AI was 31.39 (SD = 7.47, $\alpha = .929$). The Academic Integrity scale produced a mean of 33.66 (SD = 13.82, $\alpha = .901$), while the Academic Self-Efficacy scale recorded the highest mean of 40.67 (SD = 8.63, $\alpha = .870$), reflecting high reliability and internal consistency across all instruments. Correlation analysis indicated a significant negative relationship between academic integrity and self-efficacy ($r = –.20$, $p < .01$), suggesting that higher integrity scores were associated with lower self-efficacy. A weak but significant positive correlation was observed between academic integrity and AI dependency ($r = .14$, $p < .05$), whereas self-efficacy was positively correlated with AI dependency ($r = .35$, $p < .01$). These relationships demonstrate meaningful associations among the variables, indicating that increased engagement with AI tools is linked to both higher academic integrity and self-efficacy levels, albeit modestly. Linear regression analysis demonstrated that students' AI dependency significantly predicted academic integrity ($B = 0.12$, $SE = 0.05$, $\beta = .14$, $t = 2.36$, $p = .019$). The regression model was statistically significant and explained approximately 42% of the variance ($R^2 = 0.42$) in academic integrity, indicating that greater AI reliance was associated with increased tendencies toward academic misconduct behaviors. An independent samples t-test revealed no statistically significant gender differences in academic integrity ($M_{male} = 35.05$, $SD = 17.43$; $M_{female} = 33.17$, $SD = 12.33$; $t = 0.96$, $p = .337$, Cohen's $d = 0.12$) or self-efficacy ($M_{male} = 45.74$, $SD = 11.43$; $M_{female} = 46.05$, $SD = 8.96$; $t = –0.22$, $p = .825$, Cohen's $d = 0.03$). However, a significant difference was observed in AI dependency between genders, where males ($M = 94.68$, $SD =$

19.22) reported higher dependency compared to females (M = 89.70, SD = 14.22; t = 2.16, p = .032, Cohen's d = 0.29), indicating a small to moderate gender effect. Overall, the results depict that AI dependency plays a significant role in shaping both academic integrity and self-efficacy among students, with gender differences evident only in the extent of reliance on AI technologies.

Table 1: Demographic Characteristics of Participants (N = 302)

Variables	**f**	**(%)**
Gender		
Male	78	25.5
Female	224	73.8
Marital Status		
Married	37	12.3
Single	263	87.1
Divorced	2	.7
Residence		
Urban	165	54.6
Rural	137	45.4
Qualification		
Bachelor	225	74.5
MS or MPhil	54	17.9
PhD	23	7.6
Course matter		
Pure Sciences	79	26.2
Social sciences	223	73.8
Age		
18-29	278	92.1
30-39	15	5
40-50	**9**	**3**

Table 2: Descriptive Statistics and Alpha Reliabilities for all study variables (N = 302)

Scales	**No. of Items**	**M**	**SD**	**α**
RAI	10	28.12	4.8	.826
WAI	11	31.47	5.5	.88
NAI	12	31.39	7.47	.929
Academic integrity	17	33.66	13.82	.901
Self-Efficacy	**8**	**40.67**	**8.63**	**.87**

Table 3: Correlation Matrix for all the Variables Used in the Study (N = 302)

Variables	1	2	3
1. Academic integrity	-	-.20**	.14*
2. Self-Efficacy	-	-	.35**
3. Student AI Dependency	-	--	-

Note. *p < .05. **p < .01.

Table 4: Linear Regression Analysis for Academic Integrity and Students AI dependency (N = 302)

Variables	B	S.E	B	t	p
Academic integrity	22.88	4.62	-	4.95	<.00
Students AI dependency	.12	.05	.14	2.36	<.019

Note. *p < .001

Table 5: Independent Sample t-Test (N=302)

Males			**Females**				
Variables	M	SD	M	SD	t	p	Cohens'd
Academic Integrity	35.05	17.43	33.17	12.33	.96	.337	0.12
Self-Efficacy	45.74	11.43	46.05	8.96	-.22	.825	0.03
Student AI Dependency	**94.68**	**19.22**	**89.70**	**14.22**	**2.16**	**.032**	**0.29**

Note. N = sample size; M = mean; SD = standard deviation

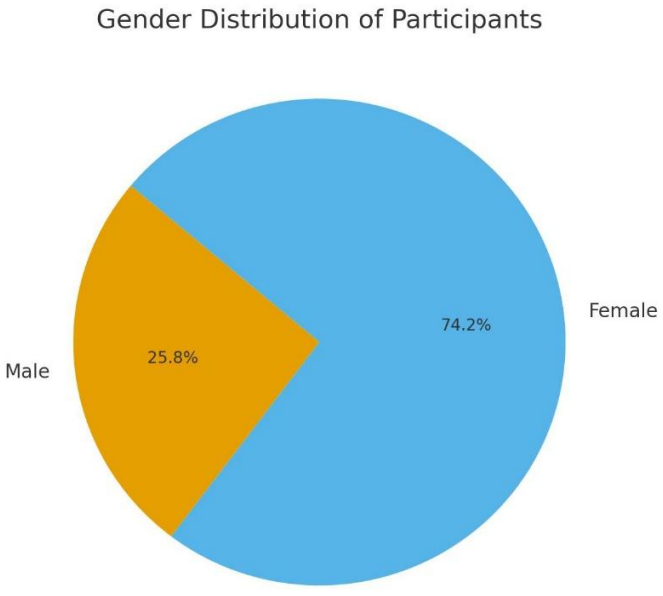

Figure 2 Gender Distribution of Participants

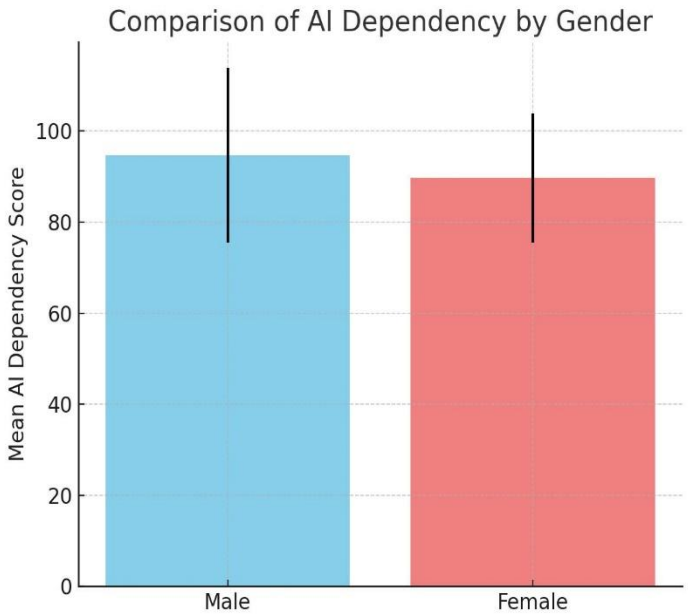

Figure 2 Comparison od AI Dependency by Gender

DISCUSSION

The findings of the present study offered valuable insights into the intricate relationships between academic reliance on artificial intelligence (AI), self-efficacy, and academic integrity among research students. The analysis revealed that increased dependence on AI tools was associated with both enhanced self-efficacy and greater engagement in academic dishonesty. This dual nature of AI reliance aligns with the theoretical assumptions of Social Cognitive Theory and Ethical Decision-Making Theory, which jointly emphasize that cognitive beliefs and moral reasoning evolve through behavioral interactions within one's environment (15-17). The results suggest that while AI technologies may facilitate academic performance and efficiency, excessive dependence can undermine ethical decision-making, reducing students' sense of ownership and accountability in scholarly work. A noteworthy finding was the positive relationship between AI dependency and academic integrity, implying that students who frequently use AI tools may be more exposed to unethical practices such as plagiarism, collusion, and contract cheating. Similar patterns have been observed in prior academic studies reporting that increased accessibility to digital tools often heightens the risk of academic misconduct, particularly when ethical awareness is limited (18,19). The observed negative association between self-efficacy and academic integrity further corroborates previous research suggesting that students with lower confidence in their academic abilities are more prone to dishonest behaviors when under performance pressure (20). Conversely, the positive correlation between AI dependency and self-efficacy indicated that students with higher academic confidence used AI not as a crutch but as a complementary tool to enhance performance and manage academic challenges effectively (21,22).

Gender-based differences were evident only in AI dependency, where male students demonstrated higher reliance on AI tools compared to females, while no significant gender variation was noted in self-efficacy or integrity. These results support earlier findings that male students often engage more with emerging technologies, possibly reflecting differences in digital literacy, confidence, or exposure (23). However, both genders exhibited comparable levels of academic honesty and self-belief, suggesting that ethical orientation and confidence are less influenced by gender than by academic context and exposure to AI tools. The integration of validated and reliable instruments strengthened the study's methodological rigor. The Students' AI Dependency Questionnaire, McCabe/ICAI Academic Misconduct Inventory (MIAMI), and the Academic Self-Efficacy Scale all demonstrated excellent internal consistency (α ranging from .826 to .929), ensuring robustness in data measurement and comparability with international research standards. The combination of a localized empirical framework and globally recognized theories positioned this study as one of the first to empirically examine AI dependency's psychological and ethical implications within a South Asian academic context. The inclusion of diverse participants across academic levels (undergraduate to PhD) and fields of study enhanced the representativeness and contextual validity of the results, contributing to the growing discourse on AI integration in education. Despite its strengths, the study was not without limitations. The cross-sectional design restricted the ability to infer causal relationships between the variables, confining interpretations to correlations rather than directional effects. Future longitudinal research could better capture how students' self-efficacy and ethical orientations evolve with prolonged exposure to AI tools. Additionally, reliance on self-reported data introduced the potential for social desirability bias, as participants might have underreported instances of academic misconduct to maintain a favorable impression. Although anonymity and confidentiality were ensured, this bias could not be completely eliminated. The purposive sampling method also limited generalizability, as findings are more applicable to research-oriented students rather than the broader student population. Nonetheless, the sample size (N = 302) and the inclusion of participants from varied academic levels provided a solid empirical foundation.

The implications of these findings are both theoretical and practical. Theoretically, the integration of Social Cognitive and Ethical Decision-Making frameworks provides a comprehensive model for understanding how cognitive beliefs, ethical reasoning, and technology usage interact in shaping academic conduct. Practically, the study underscores the urgent need for educational institutions to establish clear ethical guidelines and structured AI literacy programs. Universities should prioritize workshops that cultivate responsible AI use, critical thinking, and academic honesty. Moreover, faculty members should receive training to identify misuse of AI tools and guide students in employing them as learning aids rather than substitutes for intellectual effort. Future research should expand on these findings by exploring the mediating role of motivation and ethical reasoning in the relationship between AI dependency and academic integrity. Comparative studies across disciplines—such as contrasting STEM and social sciences—may further reveal how AI affects academic behavior differently depending on the nature of cognitive engagement required. Longitudinal designs could assess whether reliance on AI tools fosters temporary or enduring changes in students' self-regulatory and ethical patterns. Additionally, experimental studies that incorporate AI literacy interventions could help determine their effectiveness in promoting responsible use and reducing misconduct (24). In summary, the study contributes to a growing understanding of how technological integration reshapes academic behavior, self-efficacy, and moral reasoning. While AI can enhance productivity and confidence, unrestrained dependence threatens the

foundation of academic integrity. Ensuring that AI serves as a partner in education—rather than a replacement for human reasoning—requires deliberate institutional strategies, ethical awareness, and ongoing pedagogical reform. Through balanced and ethical integration, AI can support intellectual growth while preserving the authenticity and integrity of academic scholarship.

CONCLUSION

The study concluded that the integration of artificial intelligence within academic environments exerts a complex influence on students' ethical conduct and confidence in their academic capabilities. Consistent with prior evidence, greater dependence on AI tools was associated with an increased likelihood of plagiarism and other ethical breaches, while lower self-efficacy corresponded with a higher tendency toward academic misconduct. However, the study also revealed that, for some students, AI functions as a supportive instrument that enhances academic confidence rather than undermining it. By bridging global theoretical frameworks such as Social Cognitive Theory and Ethical Decision-Making Theory with empirical evidence from a South Asian academic context, the research provided culturally grounded insights into the dual role of AI in promoting learning and threatening integrity. These findings underscore the urgent need for institutions to develop structured AI literacy programs and ethical policies that cultivate responsible use of technology, reinforce students' self-reliance, and safeguard the principles of academic honesty in an evolving digital landscape.

AUTHOR CONTRIBUTION

Author	Contribution
Irfana Bibi	Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published
Haleema Sadia Khan*	Substantial Contribution to study design, acquisition and interpretation of Data Critical Review and Manuscript Writing Has given Final Approval of the version to be published
Arooba Alam	Substantial Contribution to acquisition and interpretation of Data Has given Final Approval of the version to be published
Mahnoor Yaqub Khan	Contributed to Data Collection and Analysis Has given Final Approval of the version to be published
Aamina Farooq	Contributed to Data Collection and Analysis Has given Final Approval of the version to be published
Hamza Malik	Substantial Contribution to study design and Data Analysis Has given Final Approval of the version to be published
Muhammad Abubakar	Contributed to study concept and Data collection Has given Final Approval of the version to be published
Ameer Hamza	Writing - Review & Editing, Assistance with Data Curation

REFERENCES

1. Alshater, M. (2022). M. Exploring the role of artificial intelligence in enhancing academic performance: A case study of ChatGPT.

2. Baskara, FX. R. (2023). Chatbots and Flipped Learning: Enhancing Student Engagement and Learning Outcomes through Personalised Support and Collaboration. IJORER: International Journal of Recent Educational Research, 4(2), 223–238.

3. Bin-Nashwan, S. A., Sadallah, M., & Bouteraa, M. (2023). Use of ChatGPT in academia: Academic integrity hangs in the balance. Technology in Society, 75(75), 102370.

4. Borbajo, M. N. M., Malbas, M. H., & Dacanay, L. R. (2023). Reforming Education: The Global Impact of Integrating Artificial Intelligence in the Classroom

5. Environment. American Journal of Language, Literacy and Learning in STEM Education (2993-2769), 1(5), 16–27.

6. Bouzar, A., El Idrissi, K., & Ghourdou, T. (2024). ChatGPT and academic writing self-efficacy: Unveiling correlations and technological dependency among postgraduate students. Arab World English Journal (AWEJ).

7. Cotton, D. R. E., Cotton, P. A., & Shipway, J. R. (2023). Chatting and cheating: Ensuring academic integrity in the era of ChatGPT. Innovations in Education and Teaching International, 60(2), 130–141.

8. Crompton, H., & Burke, D. (2023). AI in education: Enhancing learning or enabling dependency? Educational Technology Research and Development, 71(2), 113- 129.

9. De Villa, K. (2024, January 27). The survey shows how PH vocational schools view AI. INQUIRER.net.

10. Estrellado, C. J. P., & Miranda, J. C. (2023). Artificial Intelligence in the Philippine Educational Context: Circumspection and Future Inquiries. International Journal of Scientific and Research Publications, 13(5), 16–22.

11. Farrokhnia, M., Esfandiari, R., & Stewart, M. (2023). AI-driven learning and cognitive offloading: Implications for research students. Journal of Cognitive Science, 42(3), 231-245.

12. Habib, S., Vogel, T., Thorne, E., & Xiao, A. (2023). How Does Generative Artificial Intelligence Impact Student Creativity? Journal of Creativity, 34(1), 100072.

13. Hemade, A., Malaeb, D., Alhuwailah, A., Helmy, M., Barakat, M., Hallit, R., El Khatib, S., Rahal, M., Rabbani, S. A., Alzayer, R., Farrag, N. H., El Hajjar, R., Mallouh, J., Obeid, S., & Hallit, S. (2024). The 9-item Academic Self-Efficacy (ASE) scale: Validity, reliability and measurement invariance across sexes and six Arab nations [Preprint].

14. Huang, X., Dong, L., Vignesh, C. C., & Kumar, P. D. (2022). Self-regulated learning and scientific research using artificial intelligence for higher education systems. International Journal of Technology and Human Interaction, 18(7), 1–15.

15. Jones, M. (2022). The role of AI in academic integrity: Opportunities and risks. Computers & Education, 178, 104435.

16. Kulik, J. A., & Fletcher, J. D. (2021). Effectiveness of AI-based educational tools in higher education: A meta-analysis. Review of Educational Research, 91(4), 524-556.

17. Lee, J., & Choi, H. (2024). AI dependency and self-regulated learning in postgraduate research students: A mixed-methods approach. Journal of Educational Computing Research, 61(1), 89–107.

18. McGee, P. (2021). Ethical considerations in AI-assisted learning and plagiarism. Journal of Learning and Ethics, 27(2), 100-115.

19. Nazari, A., Hussain, I., & Jamil, S. (2021). Digital literacy and academic integrity in South Asia: A case study of university students in Pakistan. Journal of Academic Ethics, 19(3), 321–338.6

20. Ouyang, F., & Jiao, P. (2021). Artificial Intelligence in Education: the Three Paradigms. Computers and Education: Artificial Intelligence, 2(1), 100020.

21. Rettinger, D. A. (2024). Measuring academic integrity: Development and validation of the MIAMI inventory. Journal of Academic Ethics, 22(1), 50-68.

22. Zhai, X. (2022). Influence of artificial intelligence on academic writing self-efficacy in higher education students. Journal of Educational Technology Development and Exchange, 15(2), 123–138.

23. Zhang, L., & Xu, J. (2025). The paradox of self-efficacy and technological dependence: Unraveling generative AI's impact on university students' task completion. The Internet and Higher Education, 65, 100978.

24. Zhang, S., Zhao, X., Zhou, T., & Kim, J. H. (2024). Do you have AI dependency? The roles of academic self-efficacy, academic stress, and performance expectations on problematic AI usage behavior. International Journal of Educational Technology in Higher Education, 21(34).

