

Opportunities and Challenges in Education Utilizing AI-Generated Instruction and Research in the Hospitality Management Program

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Abstract— This study aimed to determine the level of challenges in AI-generated instruction and research, as well as its role in the hospitality program of Capiz State University. This study utilized a mixed-methods convergent parallel design, and a survey questionnaire with open-ended questions was used as the instrument. The respondents in the study were the 40 faculty members of the hospitality program at Capiz State University, who were selected through a total enumeration technique. Data revealed that the level of challenge in AI-generated instruction was moderately challenging, with privacy and data security and ethical considerations considered highly challenging. The result also showed a significant opportunity for AI-generated research in the hospitality program. It was also revealed through thematic analysis that the role of artificial intelligence in the hospitality program was instructional enhancement, research productivity and efficiency, personalization and student engagement, data-driven decision-making and innovation, challenges, and the responsible use of AI. It was recommended to develop instructional guidelines for the use of AI in research and instruction, and to have the faculty participate in training workshops on AI use.

Keywords— artificial intelligence, academe, curriculum, hospitality, and technology.

I. INTRODUCTION

Artificial Intelligence (AI) is changing the way we learn and conduct research by enabling new ways of teaching and learning. AI has become a key driver of digital transformation in higher education. It is defined as systems that can perform complex tasks in ways similar to how humans do (NASA, 2023). AI-generated tools are increasingly used in State Universities and Colleges (SUCs) to improve teaching efficiency, automate academic processes, and support data-driven decision-making.

Using AI-generated instruction in hospitality education opens up many new possibilities. It enables personalized learning experiences, smart tutoring systems, and automated tests that meet the needs of different students (Clugston, 2024). AI tools help researchers analyze data, compile literature, and write academic papers, making their work more productive and of higher quality. These improvements are especially useful in hospitality programs, where it is important to have practical knowledge, provide good service, and stay in line with industry standards. AI also makes things more accessible and inclusive by

providing adaptive learning platforms, real-time translations, and assistive technologies (Clugston, 2024).

However, there are also a few issues with using AI-generated instruction and research in SUCs. Concerns about data privacy, ethics, academic honesty, and excessive reliance on us to think about how to consider responsibly (Zahidi et al., 2024). Also, the lack of technical training, the faculty's readiness, and the institution's limited infrastructure may make it difficult to implement the plan (Adam, 2025). These problems show how important it is to have clear rules, good training, and a balanced use of AI in schools.

The use of AI in the hospitality program at Capiz State University (CAPSU) presents both opportunities and challenges. AI can improve teaching, research, and student involvement, but teachers and students must have the skills to use these tools properly and ethically.

Integrating AI with Sustainable Development Goal 4 makes sure that new ways of teaching lead to fair, high-quality, and inclusive learning outcomes (United Nations, 2015).

1.1 Statement of the Problem

This study aimed to determine the opportunities and challenges in education utilizing AI-generated instruction and research in the Hospitality Management Program.

Specifically, this study answered the following questions:

- What is the level of challenges on AI-generated instruction perceived by the hospitality management faculty of Capiz State University, according to privacy and data security, ethical considerations, over-reliance on AI, and lack of awareness?
- What is the level of opportunities in AI-generated research perceived by the hospitality management faculty of Capiz State University, according to idea generation, research design, data collection, data analysis, and writing and reporting?
- Is there a significant relationship between the level of challenges in AI-generated instruction and the level of opportunities in AI-generated research perceived by the hospitality management faculty of Capiz State University?
- How do the hospitality management faculty of Capiz State University perceive the role of Artificial Intelligence in instruction and research in the hospitality program?

1.2 Theoretical Framework

This study is theoretically anchored in the Technology Acceptance Model (TAM), which provides a robust framework for examining individuals' acceptance and actual use of emerging technologies.

TAM posits that technology adoption is primarily determined by two key constructs: perceived usefulness and perceived ease of use, which collectively influence users' behavioral intentions and subsequent utilization (Charness & Boot, 2020).

Within the context of hospitality education, this model offers a systematic basis for analyzing the extent to which faculty members adopt and integrate artificial

intelligence (AI)-generated tools in instruction and research practices.

Furthermore, this study is underpinned by Social Cognitive Theory (SCT), advanced by Albert Bandura, which conceptualizes human behavior as a product of reciprocal interactions among personal, behavioral, and environmental determinants. SCT emphasizes observational learning, self-efficacy, and outcome expectations as critical mechanisms influencing behavioral adoption (Nickerson, 2025).

This study uses the theory to provide a comprehensive lens for examining how hospitality faculty members develop attitudes, competencies, and behavioral dispositions toward AI through social interaction, professional experience, and institutional context.

Together, TAM and SCT offer a complementary theoretical foundation for understanding both the cognitive determinants and social processes underlying AI adoption in hospitality education.

1.3 Conceptual Framework

This study examines the relationship between the challenges of AI-generated instruction and the opportunities in AI-generated research as perceived by hospitality management faculty at Capiz State University.

The independent variable, challenges in AI-generated instruction, is operationalized through dimensions such as data privacy and security, ethical considerations, over-reliance on AI, and lack of awareness (Zahidi et al., 2024).

The dependent variable, opportunities in AI-generated research, is measured across idea generation, research design, data collection, data analysis, and writing and reporting (Clugston, 2024).

The framework tests whether a statistically significant relationship exists between these variables, consistent with theories of technology adoption and use (Charness & Boot, 2020).

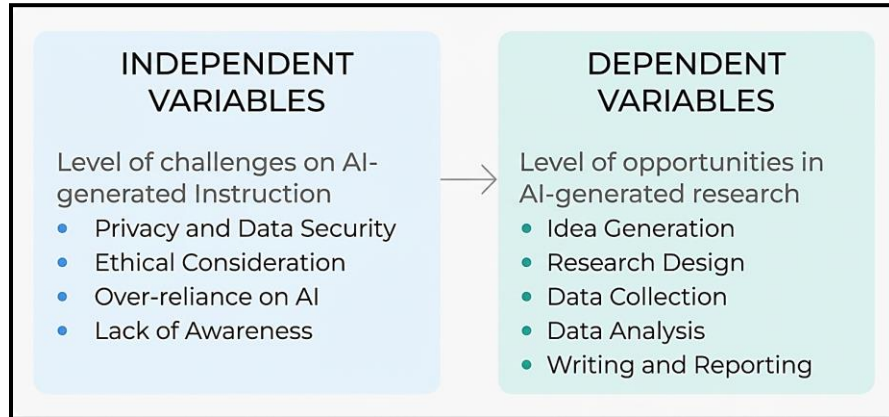


Figure 1. Conceptual Framework of the Study

II. METHODOLOGY

Research Design

This study employed a convergent parallel mixed-methods design, in which quantitative and qualitative data were collected simultaneously (ATLAS.ti, 2025; Creswell & Plano Clark, 2018). Quantitative data assessed the level of challenges in AI-generated instruction and opportunities in AI-generated research as perceived by hospitality management faculty at Capiz State University.

Qualitative data, gathered through open-ended questions, provided deeper insights into the role of AI. The concurrent collection of both data types enabled

triangulation and a more comprehensive analysis (Creswell & Plano Clark, 2018).

Respondents of the Study

The respondents in the study were hospitality management faculty from three Capiz State University campuses, Pilar, Pontevedra, and Sigma, selected through total enumeration. The sample was relatively balanced in terms of sex, with a slight majority of males (52.50%) over females (47.50%). Regarding teaching experience, most respondents were early-career faculty, with the majority having 5 years or less. This indicates that the findings primarily reflect the perspectives of relatively new teachers in the hospitality management program.

Table 1. Demographic Characteristics of the Respondents

Demographic Characteristics	f	%
Entire Group	40	100.0
Sex		
Female	19	47.50
Male	21	52.50
Years of Teaching		
Less than a year	10	25.00
1–5 years	16	40.00
6–10 years	6	15.00
More than 10 years	8	20.00

Sampling Technique

The respondents in this study were selected using a total enumeration technique, in which every member of the population was examined (Ahmed, 2024). This

was the appropriate sampling technique for this study because the population was manageable and finite, comprising 40 faculty across the three campuses of

CAPSU that offered a Bachelor of Science in Hospitality program.

Data Collection Technique

Data were collected using a validated survey questionnaire consisting of four parts: (1) respondents' demographic profile; (2) level of challenges in AI-generated instruction, adapted from Chan and Hu (2023); (3) level of opportunities in AI-generated research, adapted from Andersen et al. (2025); and (4) the role of artificial intelligence in instruction and research in the Hospitality Management program, adapted from Vieriu and Petrea (2025). Qualitative data were obtained through written reflections in response to open-ended questions. The collected data were then tallied and subjected to statistical analysis.

Research Procedure

The survey instrument underwent pilot testing with 30 non-participating respondents to establish validity and reliability. Content validation was conducted by three experts in content, methodology, and language (Polit & Beck, 2017). Items with Cronbach's alpha ≥ 0.70 were retained, resulting in an overall reliability coefficient of 0.982 (Tavakol & Dennick, 2011). Ethical clearance was obtained in accordance with the American Psychological Association (2020) standards, and Capiz State University granted permission to conduct the study.

The questionnaire was administered with informed consent, ensuring confidentiality and voluntary participation. Data were analyzed using descriptive and inferential statistics (mean, standard deviation, percentage, Pearson's r , and ANOVA), while qualitative data were examined through thematic analysis (Braun & Clarke, 2006).

F. Data Analysis Procedure

Quantitative data were analyzed using the Statistical Package for Social Sciences (SPSS) (IBM Corp., 2021). Frequency and percentage were used to describe the distribution of respondents, while mean and standard deviation were used to determine the levels of challenges and opportunities (Field, 2018). Normality was assessed using the Kolmogorov-Smirnov and Shapiro-Wilk tests, which justified the use of parametric analysis (Ghasemi & Zahediasl,

2012). Pearson's r was employed to examine the relationship between variables (Field, 2018).

Qualitative data were analyzed using the six-phase thematic analysis framework of Braun and Clarke, which includes data familiarization, coding, theme development, review, definition, and reporting (Ahmed et al., 2025). Both quantitative and qualitative findings were integrated for comparative interpretation (Creswell & Plano Clark, 2018).

III. RESULTS & DISCUSSION

Level of Challenges on AI-Generated Instruction

In Table 2, the overall level of challenges on AI-generated instruction among Hospitality Management faculty was moderately challenging ($M = 3.40$, $SD = 0.86$), indicating that while AI is useful, its integration still presents notable barriers. This finding supports the Technology Acceptance Model (TAM), which posits that perceived ease of use and perceived usefulness influence technology adoption; moderate challenges suggest partial acceptance, but existing implementation constraints.

1.1 Privacy and Data Security

This dimension was perceived as highly challenging ($M = 3.78$, $SD = 0.97$), making it the most significant concern. Issues such as misuse of personal data, lack of transparency, and data breaches were rated highly. This aligns with Pikhart and Al-Obaydi (2025) and is supported by Data Privacy Theory, which emphasizes users' concerns over control and protection of personal information. The institutions must strengthen data governance policies, ensure transparency in AI systems, and provide secure platforms to build trust among faculty users.

1.2 Ethical Considerations

Ethical concerns were also highly challenging ($M = 3.60$, $SD = 0.85$), particularly regarding academic integrity, algorithmic bias, and the diminishing role of human judgment. This aligns with Parker et al. (2026) and is grounded in Ethical AI Frameworks and Deontological Ethics, which emphasize fairness, accountability, and the responsible use of technology. There is a need for clear ethical guidelines, AI usage policies, and training

programs to ensure responsible and fair integration of AI in education.

1.3 Over-Reliance on AI

This factor was moderately challenging (M = 2.99, SD = 1.08). Concerns included dependence on AI for assignments, reduced independent thinking, and lower motivation to study. Although not the greatest concern, this finding aligns with Huang and Wu (2025) and relates to Constructivist Learning Theory, which emphasizes active, independent learning. The educators should design learning activities that promote critical thinking and limit excessive dependence on AI tools.

1.4 Lack of Understanding and Awareness

This dimension was also moderately challenging (M = 3.07, SD = 1.14), highlighting limited confidence, awareness of AI limitations, and understanding of how AI works.

This supports Paredes and Victoriano (2025) and is linked to Diffusion of Innovation Theory (Rogers), which explains that a lack of knowledge can slow the adoption of new technologies. Continuous professional development, training, and capacity-building programs are essential to enhance faculty competence and confidence in using AI.

Table 2. Level of Challenges on AI-Generated Instruction

Challenges on AI Generated Instruction	N	Mean	SD	Interpretation
Challenges on AI Generated Instruction (Overall)	40	3.40	0.86	Moderately
Privacy and Data Security				
4. There might be misuse of personal data by AI service providers	40	3.78	0.97	Highly
3. There is lack of transparency about how AI tools use data	40	3.90	1.10	Highly
2. There might be data breaches of sensitive information	40	3.85	1.05	Highly
1. There is unauthorized access to personal data	40	3.45	1.32	Moderately
Ethical Considerations				
6. There is an impact of AI on academic integrity	40	3.92	1.16	Highly
7. There is bias in AI algorithm	40	3.77	1.12	Highly
9. AI replaces judgment in educational settings	40	3.70	1.16	Highly
5. There is transparency in AI decision-making	40	3.48	1.15	Moderately
8. There is fairness in AI algorithms	40	3.15	1.14	Moderately
Over-Reliance on AI	40	2.99	1.15	Moderately
10. I rely on AI tools for completing assignments	40	3.23	1.29	Moderately
12. I depend on AI to understand complex topics instead of seeking help	40	3.00	1.22	Moderately
11. I find it difficult to solve problems without AI tools help	40	2.90	1.24	Moderately
13. I have reduced motivation to study independently	40	2.85	1.14	Moderately
Lack of Understanding and Awareness	40	3.07	1.14	Moderately
15. I am not confident in using AI tools effectively in studies	40	3.23	1.25	Moderately
14. I am not aware of limitations and errors of AI tools	40	3.00	1.24	Moderately
16. I do not fully understand how AI tools work in educational activities	40	2.98	1.23	Moderately

Note: 4.50-5.00 (Very Highly Challenging), 3.50-4.49 (Highly Challenging), 2.50-3.49 (Moderately Challenging), 1.50-2.49 (Slightly Challenging), 1.00-1.49 (Not Challenging)

Level of Opportunities in AI-Generated Research

Overall, the level of opportunities in AI-generated research among Hospitality Management faculty

was significant (M = 4.08, SD = 0.62), indicating that AI tools provide meaningful support across research activities. This supports the Technology Acceptance Model (TAM), which explains that perceived

usefulness influences technology adoption (Davis, 1989). The finding is consistent with Madanchian and Taherdoost (2025), who emphasized that AI enhances research efficiency, accuracy, and collaboration. AI is becoming an essential research support tool; thus, institutions should integrate AI into research systems and faculty training.

Idea Generation

Idea generation was rated as a significant opportunity (M = 4.12, SD = 0.64), with AI aiding in summarizing literature, identifying research gaps, and locating relevant studies. This aligns with Cerchione et al. (2025) and is supported by Knowledge Management Theory, which highlights the role of technology in knowledge creation (Nonaka & Takeuchi, 1995). AI enhances early-stage research development, enabling more innovative and relevant research outputs.

Research Design

Research design was also perceived as a significant opportunity (M = 4.05, SD = 0.69), particularly in developing frameworks, structuring proposals, and designing methodologies. This supports Khalifa and Albadawy (2024) and is grounded in Systems Theory, which views research as an interconnected process (Bertalanffy, 1968). AI improves the organization and rigor of research design, leading to higher-quality studies.

Data Collection

Data collection showed significant opportunities (M = 4.08, SD = 0.64), with AI assisting in survey design, generating datasets, and transcription. This aligns with Srivastava (2024) and reflects Automation Theory, which emphasizes efficiency through technological tools (Parasuraman et al., 2000). Implication: AI streamlines data collection,

reduces manual workload, and increases efficiency, although ethical considerations must still be addressed.

2.4 Data Analysis

This dimension was rated as a significant opportunity (M = 4.01, SD = 0.69), with AI supporting pattern recognition, statistical analysis, and visualization. This is consistent with Phan and Le (2025) and supported by Data-Driven Decision Theory, which emphasizes the importance of analytics in decision-making (Provost & Fawcett, 2013). AI enhances analytical accuracy and enables researchers to process complex data more effectively.

Writing and Reporting

Writing and reporting obtained the highest rating and were considered significant opportunities (M = 4.13, SD = 0.56). AI was particularly useful in generating summaries, improving readability, and assisting with academic writing. This aligns with Del Giglio and Da Costa (2023) and is supported by Cognitive Load Theory, which suggests that reducing mental effort improves task performance (Sweller, 1988). AI significantly improves research productivity and writing quality, making it a valuable tool in scholarly communication.

Overall Insight

The findings indicate that AI-generated research offers significant opportunities across all stages, particularly in writing, reporting, and idea generation. This is consistent with Diffusion of Innovation Theory, which explains how new technologies are adopted over time (Rogers, 2003). Higher education institutions should promote AI integration through structured policies, ethical guidelines, and continuous professional development to maximize benefits while ensuring responsible use.

Table 3. Opportunities in AI-Generated Research

	N	Mean	SD	Interpretation
Opportunities on AI-Generated Research	40	4.08	0.62	Significant
Idea Generation	40	4.12	0.64	Significant
19. AI helps summarize or analyze existing literature.	40	4.17	0.64	Significant
17. AI helps identify gaps in current research.	40	4.15	0.70	Significant
18. AI helps identify relevant literature.	40	4.15	0.66	Significant
20. AI helps identify potential collaborators.	40	4.10	0.71	Significant

21. AI helps propose new hypotheses.	40	4.03	0.77	Significant
Research Design	40	4.05	0.69	Significant
26. AI helps develop theoretical models or conceptual frameworks.	40	4.10	0.59	Significant
22. AI suggests a structure for research proposals.	40	4.08	0.80	Significant
24. AI helps design research methodology.	40	4.08	0.76	Significant
25. AI helps refine or edit content of research proposals.	40	4.03	0.77	Significant
23. AI helps draft parts of a research proposal.	40	4.00	0.85	Significant
Data Collection	40	4.08	0.64	Significant
27. AI helps formulate questions for surveys or interviews.	40	4.15	0.66	Significant
28. AI helps generate synthetic data sets.	40	4.13	0.65	Significant
29. AI transcribes recordings of research material.	40	4.08	0.80	Significant
30. AI generates synthetic data sets.	40	4.08	0.69	Significant
31. AI identifies ethical issues in research.	40	3.98	0.83	Significant
Data Analysis	40	4.01	0.69	Significant
35. AI helps pattern recognition in data.	40	4.08	0.66	Significant
36. AI creates or modifies scientific figures or images.	40	4.05	0.75	Significant
34. AI supports statistical data analysis.	40	4.00	0.75	Significant
32. AI creates or edits software code for data analysis.	40	3.98	0.73	Significant
33. AI creates or edits simulation software code.	40	3.95	0.81	Significant
Writing and Reporting	40	4.13	0.56	Significant
41. AI helps create lay summaries or similar non-academic writing for public engagement, based on your own texts.	40	4.22	0.58	Significant
37. AI proposes a title, abstract or keywords for your article.	40	4.17	0.55	Significant
38. AI edits a research article to improve readability and/or language.	40	4.10	0.59	Significant
40. AI helps write review reports during the peer review process.	40	4.10	0.63	Significant
39. AI identifies strengths and weaknesses in a manuscript during the peer review process.	40	4.05	0.68	Significant

Note: 4.50-5.00 (Exceptional Opportunities), 3.50-4.49 (Significant Opportunities), 2.50-3.49 (Moderate Opportunities), 1.50-2.49 (Limited Opportunities), 1.00-1.49 (No Opportunities)

Relationship between the level of challenges on AI-generated instruction and the level of opportunities in AI-generated research

The results support the study's conceptual framework, which assumes that challenges in AI-generated instruction influence the recognition of opportunities in AI-generated research.

The significant positive relationship ($r = 0.67$, $p < .001$) indicates that as faculty experience more challenges, they also become more aware of AI's potential benefits.

This suggests that challenges serve as learning and engagement factors, prompting faculty to explore AI

tools more deeply, which, in turn, enhances their appreciation of its research applications.

In line with the Technology Acceptance Model (Davis, 1989), even when difficulties are present, perceived usefulness remains high. Similarly, Diffusion of Innovation Theory (Rogers, 2003) explains that exposure to challenges is part of the adoption process that leads to greater understanding and eventual acceptance.

In essence, the framework is supported: challenges do not hinder AI adoption but instead help recognize its opportunities, reinforcing the interconnected relationship between instructional experience and research utilization.

Table 4. Relationship between the level of challenges on AI- generated instruction and the level of opportunities in AI- generated research

Relationship	Pearson's r	df	p-value	Remarks	Decision
Opportunities on AI-Generated Research and Challenges on AI-Generated Instruction	0.67*	38	< 0.01	Significant	Reject H ₀

Note. * p < .05

The role of Artificial Intelligence in instruction and research in the hospitality program.

Detailed Thematic Analysis with Conceptual Interpretation

Theme 1: Instructional Enhancement

Faculty members emphasized that AI enhances instruction by simplifying complex topics, generating teaching materials, and improving efficiency. AI supports lesson planning, quizzes, and simulations, making learning more engaging while reducing preparation time. It also promotes creativity and diverse instructional approaches. This aligns with Begmatova and Saydazimova (2025), who noted that AI improves academic outcomes when guided by teachers.

This supports the framework by showing that AI integration in instruction strengthens teaching effectiveness, reinforcing its perceived usefulness (Davis, 1989).

Theme 2: Research Productivity and Efficiency

AI was found to significantly improve research productivity by assisting in literature reviews, idea generation, summarization, and organization of academic writing. It also accelerates data collection, analysis, and documentation, reducing workload and improving output quality. This is supported by Kim (2026), who highlighted AI's role in enhancing efficiency and reshaping workflows.

This confirms that AI serves as a key enabler of research opportunities, aligning with the framework's increased perceived benefits.

Theme 3: Personalization and Student Engagement

Faculty highlighted AI's ability to personalize learning experiences and enhance student engagement. AI enables tailored instruction, simulations, and real-world applications, helping students develop practical

hospitality skills. This aligns with Ding and Xue (2025), who found that AI-driven personalization improves engagement and reduces anxiety.

This reflects how AI enhances learning outcomes, supporting its adoption and reinforcing its instructional value within the framework.

Theme 4: Data-Driven Decision Making and Innovation

Respondents emphasized AI's ability to analyze data and generate insights for decision-making across marketing, guest experience, and operations. AI also fosters innovation through simulations and immersive learning aligned with industry practices. This is supported by Dziadkowiec (2026), who identified AI as a valuable research asset.

This theme highlights AI's transformative role, supporting the framework's view that AI contributes to both instructional and research advancement.

Theme 5: Challenges and Responsible Use of AI

Despite its benefits, faculty noted challenges, including limited familiarity with AI, potential declines in critical thinking, and the need for ethical and responsible use. They emphasized that AI should complement—not replace—human judgment. This aligns with Tan et al. (2024), who reported that AI adoption requires technical competence and continuous adaptation.

This supports the framework by showing that challenges coexist with opportunities, reinforcing that barriers are part of the adoption process rather than deterrents.

The themes collectively support the conceptual framework, demonstrating that while challenges exist, AI significantly enhances instruction, research productivity, engagement, and innovation. These findings align with the Technology Acceptance

Model (Davis, 1989) and Diffusion of Innovation Theory (Rogers, 2003), confirming that increased

exposure to AI leads to greater recognition of its benefits.

Table 5. Role of Artificial Intelligence in instruction and research in the hospitality program

Major Theme	Description	Supporting Responses
1. Instructional Enhancement	AI improves lesson preparation, simplifies content, and enhances teaching strategies	AI simplifies lessons, creates instructional materials, improves clarity, enhances syllabus, provides examples, supports simulations
2. Research Productivity and Efficiency	AI helps speed up research processes including literature review, data analysis, and writing	AI helps summarize literature, analyze data, generate research ideas, improve academic writing, and organize research
3. Personalization and Student Engagement	AI enables personalized learning and improves student engagement	AI creates personalized learning paths, interactive learning, realistic scenarios, simulations, and engaging materials
4. Data-Driven Decision Making and Innovation	AI supports predictive analysis, simulations, and industry-based learning	AI analyzes large datasets, creates predictive models, supports decision-making, improves innovation
5. Challenges and Responsible Use of AI	Some faculty noted limitations and need for responsible use of AI	AI may reduce critical thinking, requires training, has limitations, and still needs human judgment

IV. CONCLUSIONS

The results showed that faculty members thought using artificial intelligence (AI) in teaching was moderately difficult. Even so, teachers were slowly starting to use AI in their lessons. Still, they were careful because they were worried about privacy and data security, especially the risks of sharing private information. So, even though AI was used in teaching, teachers remained hesitant to fully trust the technology because there were no clear safety measures in place. On the other hand, AI was seen as a useful tool in research, opening many doors. Faculty members viewed AI as a valuable collaborator throughout the research process—from conceptualization to composition—improving efficiency, productivity, and the overall quality of academic work.

The study also found a strong link between problems with AI-generated instruction and the likelihood of AI-generated research. This means that as problems get worse, people think there are more chances. This indicates that challenges do not impede AI adoption; instead, they coexist with, and potentially amplify, recognition of its advantages. In general, the results show that AI is an important tool for both teaching and

research. It makes teaching more effective and research more efficient, underscoring its growing importance in the academic world.

V. RECOMMENDATIONS

The research indicates that universities should formulate explicit regulations governing the application of artificial intelligence (AI) in both teaching and research. These rules should set limits on how AI can be used, ensuring it is used safely without limiting its potential benefits. Institutions can encourage ethical and effective AI integration by implementing clear policies that address concerns about misuse and overreliance.

Additionally, professors should get thorough training and attend seminars and workshops to improve their skills in using AI tools. This will help them find a balance between using AI as a tool and maintaining their critical thinking skills. Also, universities should work with more advanced schools that use AI to learn about technical issues and best practices. Future research may be undertaken with students to gain deeper insights into their perceptions, utilization, and experiences with AI in educational contexts, thereby

informing more inclusive and adaptive AI integration strategies.

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