



AI in Knowledge Sharing and Collaboration: Enhancing Faculty Motivation and Academic Excellence in Universities

Fatima Mazhar¹, Muhammad Arslan Abid², Salman Shifa³ & Salik Javeed⁴

¹Superior University, Lahore, Email: faatimamazhar@gmail.com

²Faculty of Sciences, Department of chemistry, Superior University Lahore, Faisalabad Campus, Email: arslanabid328@gmail.com

³PhD Scholar, The Islamia University of Bahawalpur, Department of Educational Training, Email: salman.shifa1@gmail.com

⁴Capital University of Science and Technology Islamabad (CUST), Email: saliksskhan@gmail.com

ARTICLE INFO

Article History:

Received: February 15, 2025
Revised: March 20, 2025
Accepted: March 23, 2025
Available Online: March 25, 2025

Keywords:

Artificial Intelligence, Knowledge Sharing, Faculty Motivation, Academic Productivity, AI Ethics, Higher Education, AI-driven Collaboration, University Faculty, Academic Excellence.

Corresponding Author:

Fatima Mazhar

Email:

faatimamazhar@gmail.com

ABSTRACT

This research investigates the contribution of Artificial Intelligence (AI) towards knowledge sharing, staff motivation, and ethical issues in higher education collaboration among university academics (N = 290). Correlation analysis indicated a moderate to weak positive correlation between AI and knowledge sharing ($r = 0.213$, $p = 0.000$) and AI and staff motivation ($r = 0.298$, $p = 0.000$), indicating that AI contributes to greater involvement and knowledge sharing. Still, regression analysis indicated that the influence of AI on academic productivity was statistically non-significant ($R^2 = 0.000$, $p = 0.970$), implying that AI, by itself, does not impact faculty motivation much. Also pointed out were the ethical issues related to data privacy, bias of AI, and intellectual property concerns, supporting the importance of having institutional policies and ethical frameworks in place for adopting AI in academic environments. These conclusions indicate that although AI is a useful tool for cooperation and productivity, its applications are limited without adequate faculty training and policy structures. Future studies must investigate longitudinal studies and qualitative analyses to determine the long-term effect of AI on academic quality.



1.0 Introduction

Artificial Intelligence (AI) is transforming knowledge sharing and collaboration in academia, revolutionizing the manner in which faculty members interact, share ideas, and contribute towards academic excellence. As knowledge creation and dissemination centers, universities heavily

depend on effective collaboration among teachers to drive research innovation, develop teaching pedagogies, and enhance overall institutional performance. AI-based applications like intelligent tutoring systems, automated content creation, collaborative platforms, and data analytics are contributing significantly to the simplification of academic interactions. Not only do these technologies ease smooth knowledge delivery, but they also profoundly influence faculty motivation through less administrative work, personalized suggestions, and more effective interaction with peers and students. By infusing knowledge-sharing systems with AI, universities are able to build a culture of lifelong learning, foster inter-disciplinary collaborations, and enhance the overall quality of education and research. Yet, as much as AI brings immense opportunities, its use also stirs concerns over ethical implications, data security, and faculty training to achieve its full potential. This study examines the impact of AI-based knowledge-sharing mechanisms on faculty motivation, collaboration, and ultimately academic excellence in universities. Based on a critical examination of AI use in higher education, this research hopes to shed light on the opportunities and challenges related to AI-based academic ecosystems.

1.1 AI-Powered Knowledge Sharing in Universities

Artificial intelligence-based knowledge-sharing platforms have revolutionized the manner in which faculty member's access, store, and share academic content. Clever algorithms built into electronic repositories like Google Scholar and Semantic Scholar assist scholars in finding relevant studies through the analysis of citation networks, keywords, and publication patterns. Recommendation systems based on artificial intelligence suggest research papers to a faculty member based on their past work, facilitating the process of literature review (Santos et al., 2024). In addition, AI-powered virtual assistants and chatbots like IBM Watson and Elicit offer instant academic assistance, responding to research-related questions and summarizing lengthy texts. These applications not only save time but also keep the faculty members informed about the newest developments in their respective domains (Alakoum et al., 2024).

In addition, AI strengthens open-access initiatives by structuring and curating enormous datasets to make scholarly work more accessible to researchers from various institutions. Plagiarism detection tools developed with AI, including Turnitin and Copyscape, promote academic integrity through the identification of cases of duplicated content and prevention of accidental copyright infringement. But the quality of its training data, the transparency of its algorithms, and the ethical guidelines of data ownership and privacy will determine the efficiency of AI in sharing knowledge (AlQhtani, 2025). Although AI presents a groundbreaking way of academic information dissemination, there is a need for universities to have policies ensuring equitable and impartial access to AI-driven tools of knowledge sharing (Fullwood et al., 2019).

1.2 AI-Driven Collaboration Among Faculty Members

AI is transforming collaboration among faculty members by providing sophisticated communication platforms, automated project management software, and smart networking systems. AI-enabled collaboration tools like Slack, Microsoft Teams, and Asana simplify communication between faculty members, supporting hassle-free coordination on research projects, grant proposals, and academic papers. These tools have incorporated AI-powered features like automatic scheduling of meetings, prioritization of tasks, and real-time transcription services, lowering administrative burden and improving efficiency (Odularu & Bokwe, 2025).

Another key space where AI improves collaboration is research matchmaking. AI-powered academic social networks such as Research Gate and Academia.edu examine faculty members'

research interests and identify likely collaborators according to citation patterns, co-occurring keywords, and historical co-authorship. Through interdisciplinary partnerships, AI enables researchers to overcome silos and participate in cross-disciplinary research, resulting in more innovative academic outputs. AI-powered tools also aid collaborative writing and editing. Tools like Jasper AI and Grammar offer sophisticated grammar checks, style enhancements, and even suggestions for content generation, all of which simplify and make academic writing flawless and more efficient (Abulibdeh et al., 2025).

Despite these benefits, AI-driven collaboration poses certain risks. Over-reliance on automated systems may reduce the depth of human interaction and critical discussions essential for scholarly work. Additionally, concerns about data privacy and intellectual property rights arise when AI tools process and analyze faculty members' research outputs (Tan & Ramayah, 2014). Universities must implement guidelines to protect faculty interests while leveraging AI's potential for enhanced academic collaboration (Mutahar et al., 2022).

1.3 Impact of AI on Faculty Motivation

Faculty motivation is an essential driver of academic productivity and institutional success. AI helps to facilitate faculty motivation through the elimination of administrative tasks, provision of personalized professional development, and increased teaching effectiveness. AI-based grading systems, including Gradescope and EvalAI, mechanize assessment tasks, enabling instructors to concentrate more on curriculum development and student interactions. Likewise, AI-based analytics offer insights into faculty performance, identifying areas of improvement and proposing strategies to improve teaching methodologies (Mahade et al., 2024).

In addition, AI enables life-long learning via tailored recommendations on research papers, professional courses, and academic events. Adaptive AI-driven learning solutions recommend courses and certifications based on faculty interests and domains, creating career advancement opportunities and skill expansion. Virtual instructor assistants, i.e., AI-driven tutoring programs, assist instructor faculty members through the management of common student queries, assignment marks, and even preparation of lecturing materials.

However, the introduction of AI in academia also raises concerns about job security and faculty autonomy. Some educators fear that AI might replace traditional teaching roles, leading to reduced employment opportunities or diminished academic authority (Zaheer, 2025). To mitigate these concerns, universities should focus on AI as a complementary tool rather than a replacement, ensuring that faculty members receive adequate training to integrate AI into their academic workflows effectively.

1.4 Ethical Considerations in AI-Driven Academic Collaboration

AI-facilitated collaboration and knowledge sharing pose a number of ethical issues, especially on data privacy, AI algorithmic bias, and intellectual property. Sensitive research data and unpublished results are commonly shared by faculty members, which, if manipulated by AI, can undermine academic integrity and innovation security. AI models trained from biased data may also perpetuate current inequalities in academic publishing where some institutions or groups get excessive attention (Cranfield et al., 2023).

Additionally, AI-generated content raises questions about authorship and ownership. As AI becomes more sophisticated in writing and editing academic papers, distinguishing between human and AI-generated contributions becomes increasingly challenging (Thani & Mirkamali,

2018). Universities must establish policies that clarify AI's role in academic authorship, ensuring transparency and accountability in research publications. Ethical AI governance frameworks should be implemented to regulate data usage, prevent algorithmic biases, and promote fair access to AI-driven academic resources (Ukeje et al., 2024).

1.5 Research objectives

The main research objectives of the study are;

- To examine how AI enhances knowledge sharing and collaboration among university faculty.
- To analyze AI's impact on faculty motivation and academic productivity.
- To explore ethical challenges in AI-driven knowledge sharing in academia.

1.6 Problem Statement

The integration of Artificial Intelligence (AI) in knowledge sharing and collaboration among university faculty presents both opportunities and challenges. While AI-driven tools enhance research efficiency, streamline academic collaboration, and reduce administrative burdens, their adoption raises concerns regarding faculty adaptation, ethical implications, and data security. Many universities struggle with the effective implementation of AI due to a lack of technical expertise, resistance to change, and uncertainties about AI's long-term impact on academic roles. Additionally, issues such as algorithmic bias, intellectual property rights, and unequal access to AI technologies create disparities in knowledge dissemination. This research aims to address these challenges by examining the role of AI in enhancing faculty motivation, improving knowledge-sharing mechanisms, and fostering academic excellence in universities.

1.7 Significant of the study

This study is significant as it explores the transformative role of Artificial Intelligence (AI) in enhancing knowledge sharing, collaboration, and faculty motivation in universities. By examining AI-driven tools and their impact on academic productivity, this research provides valuable insights into how universities can leverage AI to improve research efficiency, interdisciplinary collaboration, and teaching effectiveness. Additionally, the study addresses critical ethical concerns such as data privacy, algorithmic bias, and intellectual property rights, offering recommendations for responsible AI adoption in higher education. The findings will benefit educators, administrators, and policymakers by guiding the strategic integration of AI to foster academic excellence and innovation in universities.

2.0 Literature Review

2.1 AI in Higher Education

Artificial Intelligence (AI) is transforming higher education by augmenting teaching, research, and collaboration among faculty. AI technologies enable sharing of knowledge through computerized systems, smart search engines, and academic networking sites, which enable faculty members to easily access relevant research data (Fauzi et al., 2019). AI has also helped to customize learning experiences, streamline administrative processes, and promote interdisciplinary collaboration. Growing use of AI in academia is transforming conventional practices of dissemination of knowledge, streamlining academic operations, and making them more data-driven.

However, while AI has its revolutionary strength, its deployment in higher learning is not obstacle-free. Opposition from instructors who are ignorant of AI applications or concerned about the impact on educational processes is encountered by the majority of universities. Issues stemming from ethical concerns, data privacy, and AI bias are also issues with regard to fairness and accessibility in AI-based knowledge-sharing processes (Aithal & Aithal, 2023). To leverage the full potential of AI in higher education, the institutions must surmount these obstacles by ensuring the proper training of faculty members, making the algorithms of AI transparent, and developing policies to maintain academic integrity and inclusivity.

2.2 AI-Driven Knowledge Sharing Among Faculty Members

The application of AI in sharing knowledge has transformed the process by which faculty access, categorize, and disseminate scholarly information. AI-based search engines like Google Scholar and Semantic Scholar use machine learning techniques to scan research articles, citations, and keywords and return faculty highly relevant and personalized suggestions (Luthra et al., 2025). These AI platforms not only enhance research productivity but also enable faculty members to remain current with recent advances in their respective fields. Moreover, AI-powered summarization tools facilitate researchers to identify key points from long scholarly papers, making literature review and knowledge synthesis faster (Mahamed Ismail et al., 2015).

AI has also contributed to encouraging open-access initiatives by organizing huge bodies of scholarly content and making them more accessible globally. Repositories that are AI-powered categorize and classify research papers, allowing educators to easily access pertinent studies. In addition, plagiarism detection programs like Turnitin employ AI algorithms in the identification of academic dishonesty, making research of high ethical standards (Vick & Robertson, 2018). While these benefits exist, the success of AI in sharing knowledge relies on algorithmic equity and the moral application of data. Universities need to create policies that guarantee AI-powered tools promote instead of detract from fair access to educational resources (Ismail Al-Alawi et al., 2007).

2.3 AI in Faculty Collaboration and Research Networking

AI is making a huge impact on faculty cooperation by offering groundbreaking communication tools, automated project management systems, and smart research networking platforms. Algorithmic analysis through AI-based academic social networks such as Research Gate and Academia.edu identifies scholars with comparable research interests and makes them collaborators through interdisciplinary collaborations (Hendradi, 2024). AI-based academic networks examine the faculty members' area of research, citation behavior, and publication records to recommend appropriate collaborators, streamlining academic alliances. AI-driven recommendation systems also help instructors find research conferences, grant programs, and funding organizations, further optimizing the academic process.

Beyond networking, AI-driven collaborative writing tools have improved research productivity by assisting faculty in drafting and refining academic papers. AI-powered language models, such as Grammarly and ChatGPT, provide real-time grammar corrections, citation suggestions, and style improvements, ensuring high-quality academic outputs (Jemal & Zewdie, 2021). Moreover, AI-powered virtual assistants manage administrative tasks such as scheduling meetings, coordinating research teams, and tracking project deadlines. However, concerns about intellectual property rights and data privacy persist, as AI-driven collaboration platforms store and analyze vast amounts of faculty-generated research content. Universities must implement policies that protect

faculty members' intellectual contributions while leveraging AI's potential to enhance academic collaboration (Abdulmuhsin et al., 2025).

2.4 Impact of AI on Faculty Motivation and Productivity

AI-based automation can potentially transform faculty motivation through workload reduction and enhanced productivity. One of the most important advantages of AI for academics is its capacity to mechanize tedious administrative work, giving faculty members more time to dedicate to research and teaching. Artificial intelligence-based grading tools, like Gradescope and EvalAI, support instructors by automating grading procedures, maintaining grading consistency, and offering prompt feedback to students (Al-Zoubi, 2014). By reducing routine tasks, these AI-based tools increase faculty satisfaction and enable more substantial academic interaction.

Further, AI facilitates professional development among faculty members through individualized learning opportunities and career advancement. AI-based learning management systems suggest academic literature, research collaborations, and online courses based on the area of specialization and interest of an educator (Awan & Ather, 2024). Suggested resources assist faculty members in remaining current with the most recent teaching practices and research trends, ensuring ongoing learning and career advancement. Yet, fears of AI substituting for conventional teaching positions are still a major challenge. Some teachers worry that AI-based automation may cause job loss or devalue human-led teaching and research efforts. To address these issues, universities must place AI as an aid, not a substitute, so that faculty members remain at the core of the academic experience (Wiig, 1997).

2.5 Ethical Considerations in AI-Driven Knowledge Sharing and Collaboration

With growing adoption of AI in academia, ethical issues related to data privacy, algorithmic bias, and intellectual property rights need to be addressed with caution. Knowledge-sharing platforms based on AI tend to gather large volumes of academic data, and there are concerns regarding the storage, processing, and use of this information. Teachers might be reluctant to employ AI-based research tools because they fear data breaches or misuse of their intellectual work (Casimir et al., 2014). Without effective governance, AI systems can inadvertently leak sensitive research information, causing security threats and ethical challenges in scholarly collaboration.

Another urgent issue is the potential for bias with AI-based education tools. Existing datasets used in training AI models might have some underlying historical bias favoring one institution, part of the world, or social group over another (Majumder & Dey, 2022). Without proper precautions, AI models might perpetuate this bias to create unequal opportunities for access and learning resources in academia. To foster equity, universities should see to it that AI systems are developed using varied and representative datasets, are subject to periodic audits, and are in compliance with ethical AI practices. Policies also need to be set on AI-generated content and authorship to address issues related to academic integrity and the contribution of AI in research output (Maina, 2023).

2.6 Research Gap

Despite the growing integration of Artificial Intelligence (AI) in knowledge sharing and faculty collaboration, significant research gaps remain in understanding its long-term impact on academic motivation and productivity. While existing studies highlight AI's potential to enhance research efficiency and streamline administrative tasks, there is limited empirical evidence on how AI influences faculty engagement, creativity, and interdisciplinary collaboration. Additionally, ethical concerns such as algorithmic bias, data privacy, and intellectual property rights in AI-driven

academic tools require further exploration to ensure equitable access and responsible AI adoption. Moreover, most research focuses on AI's role in student learning rather than its direct effects on faculty experiences and institutional policies. This study aims to address these gaps by providing a comprehensive analysis of AI's impact on faculty motivation, ethical challenges, and best practices for AI-driven knowledge sharing in universities.

2.7 Hypothesis

There are main hypothesis;

1. **H1:** There is a significant positive relationship between AI integration and enhanced knowledge sharing and collaboration among university faculty.
2. **H2:** There is a significant impact of AI on faculty motivation and academic productivity.
3. **H3:** There are significant ethical concerns in AI-driven knowledge sharing in academia.

3.0 Methodology

3.1 Research Design

A quantitative research design was adopted for this study to examine the impact of Artificial Intelligence (AI) on knowledge sharing, faculty motivation, and ethical challenges in academia. A quantitative approach was chosen as it enabled the collection of numerical data, allowing for statistical analysis and objective evaluation of relationships between variables (Creswell & Creswell, 2018). By employing structured survey instruments, the study ensured reliability, consistency, and generalizability of findings.

3.2 Population and Sample Size

The target population for this study was university teachers, as they were directly involved in academic collaboration, research, and knowledge-sharing processes. Faculty members from multiple universities were surveyed to ensure a diverse representation of academic disciplines and institutional contexts. The sample size for the study was 290 university teachers, determined based on statistical considerations for adequate representation and generalizability of results.

3.3 Sampling Technique

A probability sampling technique was employed to ensure that every faculty member in the selected universities had an equal chance of participation. This method enhanced the validity and representativeness of the sample while minimizing selection bias (Saunders et al., 2019). A simple random sampling approach was utilized to select participants, ensuring that the sample accurately reflected the broader university faculty population.

3.4 Data Collection Method

Data were collected using a structured questionnaire designed to measure faculty perceptions of AI's role in knowledge sharing, motivation, and ethical concerns. The questionnaire included Likert-scale questions to quantify responses, ensuring ease of statistical analysis. Prior to full deployment, the questionnaire underwent a pilot study to assess its reliability and validity. Ethical considerations such as informed consent and data confidentiality were strictly observed during data collection.

3.5 Data Analysis Techniques

To analyze the collected data, various statistical techniques were employed:

- **Correlation Analysis:** This method was used to determine the strength and direction of relationships between AI adoption, faculty motivation, and knowledge sharing. A Pearson correlation test was conducted to assess whether AI integration positively influenced faculty collaboration and academic productivity.
- **Regression Analysis:** A multiple regression model was used to examine the extent to which AI impacted faculty motivation and ethical concerns. This technique helped determine the predictive power of AI-related variables on faculty engagement and knowledge dissemination.
- **T-Test:** An independent samples t-test was conducted to compare faculty perceptions of AI integration across different demographics (e.g., experience level, academic discipline). This helped identify variations in AI adoption and its perceived impact on knowledge sharing and motivation.

3.6 Ethical Considerations

The study adhered to ethical research principles, including informed consent, confidentiality, and voluntary participation. Participants were assured that their responses would remain anonymous and used solely for academic purposes. Ethical approval was sought from the relevant institutional review board before data collection began.

4.0 Data Analysis

The data analysis in this study involved the application of statistical techniques to examine the relationship between Artificial Intelligence (AI) integration and faculty knowledge sharing, motivation, and ethical concerns in academia. Descriptive statistics were used to summarize the collected data, providing insights into the distribution of responses. Correlation analysis was conducted to assess the strength and direction of relationships between AI adoption and faculty engagement. Regression analysis was employed to determine the predictive influence of AI on faculty motivation and ethical challenges, identifying key factors affecting academic productivity. Additionally, an independent t-test was performed to compare faculty perceptions across different demographic groups, ensuring a comprehensive evaluation of AI’s impact. These analytical methods enabled a rigorous examination of the research hypotheses, providing empirical evidence to support the study’s conclusions.

4.1 Demographic Analysis

Table 1: Demographic Characteristics of Respondents (N = 290)

Demographic Variable	Category	Frequency (N)	Percentage (%)
Gender	Male	84	29.0
	Female	95	32.8
	Other/Prefer not to say	111	38.3
Age Group	25 – 34 years	107	36.9
	35 – 44 years	116	40.0
	45 – 54 years	50	17.2

Demographic Variable	Category	Frequency (N)	Percentage (%)
Academic Rank	55 and above	17	5.9
	Lecturer	118	40.7
	Assistant Professor	113	39.0
	Associate Professor	47	16.2
	Professor	12	4.1
Years of Teaching Experience	Less than 5 years	116	40.0
	5 – 10 years	115	39.7
	11 – 20 years	41	14.1
	More than 20 years	18	6.2
Field of Expertise	Science & Technology	147	50.7
	Social Sciences	66	22.8
	Humanities	12	4.1
	Business & Economics	44	15.2
	Others	21	7.2

The demographic breakdown of the sample (N = 290) offers important information regarding the distribution of participants. When it comes to gender, the respondents were relatively evenly distributed, with male faculty members making up 29.0%, female faculty members making up 32.8%, and a considerable 38.3% declining to report their gender. On age, a majority of the participants fell under the 35–44 years category (40.0%), followed by 25–34 years (36.9%), and a mere 5.9% being 55 years and older, which suggests a relatively young faculty demographic. The distribution of academic ranks indicates that a majority of the participants were Lecturers (40.7%) and Assistant Professors (39.0%), and a mere 4.1% being a Professor, suggesting an early to mid-career scholar profile. With regard to teaching experience, a considerable percentage had less than 5 years (40.0%) or 5–10 years (39.7%), while a mere 6.2% had over 20 years, further supporting the relatively young faculty makeup. Area of specialty was dominated by Science & Technology (50.7%), followed by Social Sciences (22.8%) and Business & Economics (15.2%), while Humanities faculty were just 4.1%, further supporting a STEM-dominated participant sample. These demographic characteristics provide a broad representation of faculty members, offering various views on AI integration in knowledge sharing and collaboration.

4.2 Correlation Analysis

Table 2: Correlations

			AI Knowledge Sharing	and AI Faculty Motivation	Ethical Challenges in AI-driven Knowledge Sharing	General Perceptions of AI in Academia
AI and Knowledge Sharing	Pearson Correlation	Sig. (2-tailed)	1	.298**	.213**	. ^b
				.000	.000	.
			290	289	290	0
AI and Faculty Motivation	Pearson Correlation	Sig. (2-tailed)	.298**	1	.150*	. ^b
			.000		.011	.
			3699			

	N	289	289	289	0
Ethical Challenges in AI-driven Knowledge Sharing	Pearson Correlation	.213**	.150*	1	. ^b
	Sig. (2-tailed)	.000	.011		.
	N	290	289	290	0
General Perceptions of AI in Academia	Pearson Correlation	. ^b	. ^b	. ^b	. ^b
	Sig. (2-tailed)	.	.	.	.
	N	0	0	0	0

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

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

b. Cannot be computed because at least one of the variables is constant.

The correlation analysis identifies strong correlations between AI and knowledge sharing, faculty motivation, and ethical issues in AI-driven knowledge sharing. The Pearson correlation coefficient between AI and knowledge sharing and faculty motivation is 0.298 ($p = 0.000$), showing a weak to moderate positive correlation, implying that the adoption of AI improves faculty motivation. Moreover, AI and knowledge sharing have a weak positive relationship with ethical issues ($r = 0.213$, $p = 0.000$), suggesting that as the use of AI increases, ethical issues also become more pronounced. The relationship between faculty motivation and ethical issues is 0.150 ($p = 0.011$), which reflects a weak but statistically significant relationship, suggesting that motivation through AI may be affected by ethical factors. Nevertheless, overall attitudes toward AI in academia could not be calculated, perhaps because of a constant variable. In general, the findings indicate that AI has a positive impact on knowledge sharing and faculty motivation but also poses ethical issues that must be confronted.

4.3 Regression Analysis

Table 3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.002 ^a	.000	-.003	5.25485

a. Predictors: (Constant), AI's impact on faculty motivation and academic productivity.

Table 4: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.040	1	.040	.001	.970 ^b
	Residual	7925.074	287	27.613		
	Total	7925.114	288			

a. Dependent Variable: AI and Faculty Motivation

Table 4: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.037	.569		10.611	.000
	Q15	.010	.263	.002	.038	.970

a. Dependent Variable: AI and Faculty Motivation

The results of the regression analysis show that the effect of AI on academic productivity and instructor motivation is not a significant predictor of instructor motivation. The R-squared is 0.000, which indicates that the effect of AI on academic productivity explains essentially none of the variance in instructor motivation. The Adjusted R-squared of -0.003 indicates that adding this predictor does not enhance the explanatory power of the model. The ANOVA test ($F = 0.001$, $p = 0.970$) further confirms that the model is not statistically significant, indicating that AI's impact on academic productivity does not have a meaningful effect on faculty motivation. The unstandardized coefficient ($B = 0.010$, $p = 0.970$) is extremely small and insignificant, reinforcing that AI's influence on faculty motivation is negligible in this dataset. In general, these results indicate that AI has a minimal direct influence on faculty motivation and academic productivity, which in turn suggests that other determinants might contribute to faculty motivation in academia to a greater extent.

4.4 Discussion

The results of this research offer significant implications for the contribution of Artificial Intelligence (AI) to knowledge sharing, faculty motivation, and ethical issues in scholarly collaboration. The correlation test reveals that there is a weak but positive relationship between AI and faculty motivation ($r = 0.298$, $p = 0.000$) and between AI and knowledge sharing ($r = 0.213$, $p = 0.000$). These findings indicate that while AI supports better faculty engagement and dissemination of knowledge, its total effect is limited. This corresponds with the evidence from (Stanca et al., 2022), who noted that while AI supports easier access to knowledge, it only works when faculty members embrace using AI tools in their pedagogy. Also, (Wathanakom, 2024) observed that AI can automate knowledge-sharing processes but needs appropriate training and institutional backing for its full utilization.

Despite the observed correlations, the regression analysis demonstrated no significant predictive relationship between AI's impact on faculty motivation and academic productivity ($R^2 = 0.000$, $p = 0.970$). This suggests that AI alone is not a determining factor in enhancing faculty motivation and that other institutional and personal factors might play a greater role. This result is supported by (Yigzaw et al., 2021), who claimed that although AI can automate scholarly routine tasks, intrinsic motivation, workload allocation, and faculty autonomy are still vital determinants of faculty motivation. Likewise, (Carrasco-Beltrán et al., 2024) stressed that AI must be regarded as a supplementary tool and not an independent means to enhance faculty productivity and motivation.

The research further identifies ethical issues surrounding AI-led knowledge sharing as indicated by the relationship between AI and ethical problems ($r = 0.213$, $p = 0.000$). The data privacy, bias in AI, and intellectual property concerns were voiced by the faculty, similar to what has been discussed in earlier studies like (Kuzhabekova & Lee, 2020), where there were alarms raised on the ethical issues faced with AI within academia. Besides, (Wawak et al., 2024) added that AI tools, as helpful as they are, might lead to over-dependence on automation, hence diminishing critical thinking and originality in academic production. These results imply that universities ought to set comprehensive guidelines and ethical standards to ensure that AI usage during faculty collaboration and knowledge sharing is responsible (Siegel et al., 2003).

5.0 Conclusion

In conclusion, while AI has a moderate impact on knowledge sharing and faculty motivation, its role in academic productivity remains limited and non-significant according to this study's regression analysis. Ethical concerns further complicate AI adoption, necessitating a balanced

approach that integrates AI while maintaining academic integrity and faculty autonomy. Future research should explore longitudinal studies and qualitative approaches to assess AI's evolving role in higher education.

5.1 Future Implication

The implications of this study are important in the future integration of AI into academic knowledge exchange and faculty stimulation. With advancements in AI, universities need to work on building formal training programs to improve the proficiency of faculties in AI-powered collaboration. The institutions also need to set out ethical standards and policies to cover issues of data privacy, bias in AI, and intellectual property rights. Longitudinal and qualitative studies should be conducted in future to evaluate the long-term effect of AI on academic productivity and faculty engagement. Additionally, AI developers and policymakers must collaborate to develop tailored AI solutions specific to the needs of higher education, so that AI is used as a supportive system and not a substitute for human intelligence. By addressing these fronts, AI can be successfully used to promote a collaborative, innovative, and morally upright academic atmosphere.

References

1. Abdulmuhsin, A. A., AL-Taie, A. A. A., Dbesan, A. H., Alkhwalidi, A. F., & Samara, H. (2025). Impact of the organizational dimension of workplace friendship on knowledge management processes: an Islamic higher education perspective. *Journal of Islamic Accounting and Business Research*.
2. Abulibdeh, A., Baya Chatti, C., Alkhreibi, A., & El Menshawy, S. (2025). A Scoping Review of the Strategic Integration of Artificial Intelligence in Higher Education: Transforming University Excellence Themes and Strategic Planning in the Digital Era. *European Journal of Education*, 60(1), e12908.
3. Aithal, P., & Aithal, S. (2023). How to empower educators through digital pedagogies and faculty development strategies. *International Journal of Applied Engineering and Management Letters (IJAEML)*, 7(4), 139-183.
4. Al-Zoubi, D. M. (2014). Improving teaching and learning at universities-the use of knowledge management. *International Journal of Advanced Corporate Learning*, 7(1), 32.
5. Alakoum, A., Nica, E., & Abiad, M. (2024). Revolutionizing Faculty Performance Evaluation: The Future Role of AI in Higher Education. *Journal of Self-Governance & Management Economics*, 12(1).
6. AlQhtani, F. M. (2025). Knowledge Management for Research Innovation in Universities for Sustainable Development: A Qualitative Approach. *Sustainability*, 17(6), 2481.
7. Awan, R.-u.-N., & Ather, T. (2024). The knowledge ties that bind: mediating effect of knowledge management on heads' leadership and teachers' performance. *Cogent education*, 11(1), 2394740.
8. Carrasco-Beltrán, D., Serrano-Sierra, A., Cuervo, R., Valbuena-Bermúdez, C., Pavlich-Mariscal, J. A., & Granados-León, C. (2024). Digital Transformation in University Architecture: Optimizing Construction Processes and User Experience through CAMPUS 2.0 at Pontificia Universidad Javeriana. *Buildings*, 14(10), 3095.
9. Casimir, G., Ng, Y., & Cheng, C. (2014). Al-Alawi, AI, NY Al-Marzooqi and YF Mohammed (2007). Organizational culture and knowledge sharing: critical success factors. *Journal of knowledge management* 11 (2): 22-42. Alhammad, F., S. Al Faori and L. Abu Husan (2009). Knowledge Sharing In The Jordanian Universities. *Journal of Knowledge Management Practice* 10 (3). *Technology*, 12, 31-2007.

10. Cranfield, D., Venter, I., & Daniels, A. (2023). Using ChatGPT to investigate trends in digital storytelling and knowledge sharing in higher education. *EDULEARN23 Proceedings*,
11. Fauzi, M. A., Nya-Ling, C. T., Thursamy, R., & Ojo, A. O. (2019). Knowledge sharing: Role of academics towards research productivity in higher learning institution. *VINE Journal of Information and Knowledge Management Systems*, 49(1), 136-159.
12. Fullwood, R., Rowley, J., & McLean, J. (2019). Exploring the factors that influence knowledge sharing between academics. *Journal of Further and Higher Education*, 43(8), 1051-1063.
13. Hendradi, P. (2024). Implementation of the knowledge management (km) model in increasing student body in private universities. *ADI Journal on Recent Innovation*, 6(1), 32-43.
14. Ismail Al-Alawi, A., Yousif Al-Marzooqi, N., & Fraidoon Mohammed, Y. (2007). Organizational culture and knowledge sharing: critical success factors. *Journal of knowledge management*, 11(2), 22-42.
15. Jemal, S., & Zewdie, S. (2021). Role of knowledge management on organizational performance, case of Jimma University in Ethiopia. *Journal of International Business and Management*, 4(5), 1-18.
16. Kuzhabekova, A., & Lee, J. T. (2020). Internationalization and local research capacity strengthening: Factors affecting knowledge sharing between international and local faculty in Kazakhstan. *European Education*, 52(4), 297-311.
17. Luthra, A., Pancholi, N., Dixit, S., Singh, A., & Garg, S. (2025). Cultivating digital culture: exploring the impact of digital knowledge management on employee performance in higher educational institutions. *International Journal of System Assurance Engineering and Management*, 1-17.
18. Mahade, A., Abdallaa, A. A., & Elmahi, A. (2024). Empowering Academic Excellence: A Theoretical Exploration of the Influence of HRM Empowerment on Faculty Job Performance in UAE Higher Education. In *Opportunities and Risks in AI for Business Development: Volume 1* (pp. 529-539). Springer.
19. Mahamed Ismail, N. A., Welch, C., & Xu, M. (2015). Towards a sustainable quality of university research: knowledge sharing. *Knowledge management research & practice*, 13(2), 168-177.
20. Maina, J. (2023). *Adoption of Internet of Things in Enhancing Knowledge Management in University Libraries: A Case Study of Catholic University of Eastern Africa, Kenya KeMUJ*.
21. Majumder, S., & Dey, N. (2022). *AI-empowered knowledge management*. Springer.
22. Mutahar, Y., Farea, M. M., Abdulrab, M., Al-Mamary, Y. H., Alfalah, A. A., & Grada, M. (2022). The contribution of trust to academic knowledge sharing among academics in the Malaysian research institutions. *Cogent business & management*, 9(1), 2038762.
23. Odularu, O. I., & Bokwe, P. (2025). Advancing knowledge sharing and information literacy in African HEIs: challenges, innovations and future directions. *South African Journal of Libraries and Information Science*, 91(1), 1-10.
24. Santos, E., Carvalho, M., & Martins, S. (2024). Sustainable enablers of knowledge management strategies in a higher education institution. *Sustainability*, 16(12), 5078.
25. Siegel, D. S., Waldman, D. A., Atwater, L. E., & Link, A. N. (2003). Commercial knowledge transfers from universities to firms: improving the effectiveness of university–industry collaboration. *The Journal of High Technology Management Research*, 14(1), 111-133.

26. Stanca, L., Dabija, D.-C., & Păcurar, E. (2022). Community of practice: Converting IT graduate students into specialists via professional knowledge sharing. *Kybernetes*, 51(2), 557-581.
27. Tan, C. N.-L., & Ramayah, T. (2014). The role of motivators in improving knowledge-sharing among academics. *Information Research: An International Electronic Journal*, 19(1), n1.
28. Thani, F. N., & Mirkamali, S. M. (2018). Factors that enable knowledge creation in higher education: a structural model. *Data Technologies and Applications*, 52(3), 424-444.
29. Ukeje, I. O., Elom, C. O., Ayanwale, M. A., Umoke, C. C., & Nwangbo, S. O. (2024). Exploring an innovative educational governance framework: Leveraging artificial intelligence in a stakeholder-driven 'Open Campus Model' in South East Nigerian Universities. *International Journal of Learning, Teaching and Educational Research*, 23(6), 416-440.
30. Vick, T. E., & Robertson, M. (2018). A systematic literature review of UK university–industry collaboration for knowledge transfer: A future research agenda. *Science and Public Policy*, 45(4), 579-590.
31. Wathanakom, N. (2024). Enhancing Teaching and Learning Through Digital KM at an Open University. European Conference on Knowledge Management,
32. Wawak, S., Teixeira Domingues, J. P., & Sampaio, P. (2024). Quality 4.0 in higher education: reinventing academic-industry-government collaboration during disruptive times. *The TQM Journal*, 36(6), 1569-1590.
33. Wiig, K. M. (1997). Knowledge management: an introduction and perspective. *Journal of knowledge management*, 1(1), 6-14.
34. Yigzaw, S. T., Jormanainen, I., & Tukiainen, M. (2021). Knowledge sharing in the higher education environment of developing economies–The case of Eritrea. *The African Journal of Information Systems*, 13(3), 6.
35. Zaheer, M. A. (2025). Developing an integrated model for remote teaching amelioration with artificial intelligence (AI) awareness. *Quality assurance in Education*, 33(2), 283-304.