

UNDERGRADUATE STUDENTS' PERCEPTION OF GENERATIVE ARTIFICIAL INTELLIGENCE TOOLS AND THEIR ACADEMIC INTEREST IN ECONOMICS EDUCATION AT UNIVERSITY OF JOS

Shehu Yusuf Haruna

Department of Social Science Education
Faculty of Education
University of Jos
yusufkaturu@gmail.com
+2348137536068

Nura Hassan Argungu

Department of Social Science Education
Faculty of Education
Federal University, Birnin Kebbi
nurahassan1160@gmail.com
+2348060414867

Nathaniel Zumnan Johnson

Department of Social Science
Federal University of Education Pankshin
nathjay@gmail.com
+2348036219842

&

Idris Khadija Jummai

Department of Social Science Education
Faculty of Education
University of Jos
+2347065157120

Abstract

This paper investigated the undergraduate students' perception of generative artificial intelligence tools and their academic interest in economics education at university of Jos. The study was guided by three objectives and three corresponding research questions were answered in the study. This study adopted a descriptive research design, specifically utilizing a cross-sectional survey approach to examine undergraduate Economics Education students' perception of Generative Artificial Intelligence (AI) tools and their influence on academic interest at the University of Jos. The population comprised all 478 undergraduate Economics Education students across 100 to 400 levels, from which a sample of 200 respondents was selected using stratified random sampling technique. Data were collected using a researcher-developed instrument titled "Undergraduate Students' Perception of Generative AI and Academic Interest Questionnaire", which was validated by experts and achieved a Cronbach Alpha reliability coefficient of 0.71. The questionnaire contained 15 items structured on a 4-point scale across three sub-sections: awareness and usage, perceived usefulness and ease of use, and influence on academic interest. Findings revealed among other things that, Findings revealed that undergraduate Economics Education students demonstrate moderate to high levels of awareness and usage of Generative AI tools for academic purposes. The study concluded that, Generative AI tools are becoming integral to students' academic experiences, serving as important supplements to traditional learning methods. However, the translation of

positive perceptions into sustained academic effort requires structured institutional support. The study recommended among others things that, university authorities should provide structured training and workshops on effective and ethical use of Generative AI tools.

Keywords: Perception, generative artificial intelligence, academic interest and Economics

Introduction

Education remains the most potent tool for driving national growth, emancipation, and the holistic development of human society; indeed, its importance in the 21st century cannot be overemphasized. In the Nigerian context, education is strategically positioned as a catalyst for innovation, poverty reduction, and sustainable economic advancement, serving as the foundational pillar for the nation's human capital development (Nwosu, 2021). Despite its critical relevance, the level of education in Nigeria currently faces a dual reality: while there is a significant expansion in the number of tertiary institutions surpassing 270 as of 2024, the sector is simultaneously grappling with systemic challenges such as inadequate funding, infrastructural decay, and a mismatch between academic curricula and the evolving demands of the global labour market (Ololube, 2024). Consequently, for education to truly fulfil its role in Nigeria's national aspirations, there is a dire need for strategic technology integration and pedagogical reforms that align with contemporary economic realities.

Central to these reforms is the role of Economics Education, a specialized field of study that bridges the gap between economic theory and educational practice, aiming to produce individuals who are not only economically literate but also capable of making informed decisions in a complex global economy. According to Omojimiye (2019), Economics Education is defined as "the study of how resources are allocated to and within the education sector and how these investments affect economic growth, development, and individual well-being." Furthering this perspective, Olaniyan and Okemakinde (2020) describe the discipline as a field that applies economic tools and principles to understand the role of education in the economic development of individuals and nations. At the university level, specifically within institutions like the University of Jos, the primary objectives of the programme include equipping student-teachers with pedagogical content knowledge, fostering entrepreneurial and managerial competencies, and developing the critical thinking skills necessary for solving societal economic problems (Gotip, 2024). By producing graduates who can effectively teach and apply economic principles, Economics Education serves as a sure way to drive national growth and ensure the sustainable emancipation of the Nigerian society.

Beyond the formal curriculum, the psychological side of learning—specifically student interest—is what truly dictates academic success in higher education. Interest isn't just a fleeting preference; it is a powerful motivational force that energises a student's focus and shapes their career path (Renninger & Hidi, 2016; Hidi & Harackiewicz, 2021). In our field, this interest peaks when students see the subject matter as personally relevant and vital to their future careers. Research within Nigerian universities suggests that when students experience "situational interest" often sparked by a particularly engaging lecture or tool, it can grow into a lasting personal commitment to the subject, leading to much better performance in difficult modules (Oryza, 2021). For us at the University of Jos, fostering this interest is not a luxury but a necessity for mastering the analytical demands of modern economics.

However, this interest doesn't develop in a vacuum; it is shaped by a mix of personal, social, and institutional factors. As Makalang (2023) points out, a student's drive is often tied to their intrinsic motivation and how useful they think the course will be in the actual labour market. Varieties of factors may influence students' interest in Economics and some of such factors include school environment, peer pressure, teaching strategy, socio-economic background and technological related factors among others. One product of technological advancement is artificial intelligence which is gradually creeping into educational business but helping students and educators carry out educational activities better if properly used.

Artificial Intelligence (AI) is broadly understood as the simulation of human intelligence by computer systems, enabling machines to perform cognitive tasks such as learning, reasoning, and decision-making (Gignac & Szodorai, 2024). In the academic sphere, its role has shifted from a mere back-end administrative tool to a central pedagogical assistant that facilitates personalised learning and real-time feedback (World Bank, 2025). The true "crux" of the current digital revolution, however, is Generative Artificial Intelligence (GenAI). Unlike traditional AI, which primarily focuses on identifying patterns or making predictions based on existing data, GenAI is designed to create entirely new content including text, images, and complex code that closely mimics human creativity (Imran, 2025). Defined as a class of AI models that use large datasets to produce original outputs in response to user prompts, GenAI technologies like Large Language Models (LLMs) and multi-modal generators have become the primary focus of educational research due to their ability to automate "knowledge work" and enhance the efficiency of information production.

In Economics Education, these tools are being incorporated into various educational activities to bridge the gap between abstract theory and practical application. Various types of GenAI, such as conversational chatbots (e.g., Google Gemini, ChatGPT), image generators (e.g., Midjourney), and data assistants (e.g., Microsoft Copilot), offer distinct advantages for students at tertiary institutions. For instance, students can utilise LLMs for "idea generation" to brainstorm research topics or to simplify complex econometric models into digestible summaries, thereby fostering a deeper level of conceptual understanding (Beck & Brodersen, 2025). Furthermore, these tools allow for the creation of dynamic simulations of market behaviours or the generation of synthetic datasets for practice in statistical analysis. By acting as a 24/7 "intelligent tutor," GenAI can provide immediate feedback on student essays or help refine their technical writing skills, which are essential for professional success in the global economy (Owan, Agunwa & Akah, 2023). When used responsibly, these tools do not just automate tasks; they serve as collaborators that help students navigate the rigorous analytical demands of the economics curriculum.

Current research into technology acceptance suggests that "perceived usefulness" is a major factor; students are far more likely to engage deeply when they see that new tools like Generative Artificial Intelligence can simplify data analysis or boost their research potential (Rispler, Schmidt & Weber, 2025). Other critical influences include the quality of the lecturer's delivery, the availability of reliable digital tools on campus, and even broader socio-economic factors like parental support and career coaching. Identifying these specific triggers is vital for us as educators to create a learning environment that keeps students engaged even as the Nigerian educational landscape undergoes rapid digital shifts to better

understand how these GENAIs possibly influence students' interest there is need to understand the perception of students towards the generative artificial intelligence tools.

Perception, in an academic context, is defined as the cognitive process through which individuals select, organise, and interpret sensory stimuli to form a coherent understanding of their environment (Qasim, 2021). Within the literature, perception is generally categorised into two distinct types: sensory perception, which relates to the immediate physical experience of a tool, and cognitive perception, which involves the internal evaluation of a tool's utility and ease of use (Slameto, 2022). For Economics Education students at the University of Jos, this perception is often filtered through the lens of the Technology Acceptance Model (TAM), where "perceived usefulness" and "perceived ease of use" determine whether a student adopts or rejects an innovation. Recent studies in Nigerian tertiary institutions suggest that while students often perceive Generative AI as a "productivity enhancer" that simplifies complex data sets, there remains a significant "risk-based perception" regarding the accuracy of AI-generated economic data and its potential to encourage academic laziness (Tsiani& Agbo, 2024).

These perceptions are far from passive; they serve as a primary driver of a student's academic interest and long-term engagement with the discipline. When a student perceives Generative AI as a "cognitive scaffold" that can break down abstract economic theories into manageable insights, their situational interest is likely to be stimulated, leading to a more profound commitment to the course (Adeshola & Adigun, 2024). This positive cognitive appraisal transforms the learning experience from a rote exercise into an interactive exploration, thereby sustaining the student's motivation even when faced with rigorous mathematical modules. Ultimately, the way Economics Education students at the University of Jos interpret the value of these tools will dictate whether they develop a tech-savvy professional identity or remain tethered to traditional, less efficient learning methods. Their perception would invariably influence their academic interest favourably or adversely. While there are handful of studies on generative artificial intelligence tools and students' interest there is little literature specifically to students' perception of generative artificial intelligence tools and their academic interest in economics education at university of Jos which is the motivation behind this study.

Aim and Objectives of the Study

The aim of the study was to undergraduate students' perception of generative artificial intelligence tools and their academic interest in Economics Education at the University of Jos. specifically the study objectives include;

1. To find out the levels of awareness and usage of Generative Artificial Intelligence tools among undergraduate Economics Education students at the University of Jos
2. To investigate how undergraduate students at the University of Jos perceive the usefulness and ease of use of Generative AI tools in mastering Economics Education concepts?
3. To find out how perception of Generative AI tools influence the academic interest of Economics Education students at the University of Jos?

Research Questions

The following research questions were answered

1. What are the levels of awareness and usage of Generative Artificial Intelligence tools among undergraduate Economics Education students at the University of Jos?
2. How do undergraduate students at the University of Jos perceive the usefulness and ease of use of Generative AI tools in mastering Economics Education concepts?
3. To what extent does the perception of Generative AI tools influence the academic interest of Economics Education students at the University of Jos?

Methodology

This study adopted a descriptive research design, specifically utilising a cross-sectional survey approach. This design was deemed most appropriate as it allowed for the collection of data from the respondents at a single point in time to provide a "snapshot" of current perceptions without the need for a longitudinal follow-up. The population for the study comprised all 478 undergraduate Economics Education students at the University of Jos, spanning across 100 to 400 levels of study. A sample size of 200 respondents was selected using the stratified random sampling technique, which allowed for proportionate representation from each year of study. The instrument for data collection was a structured, researcher-developed instrument titled "Undergraduate Students' Perception of Generative AI and Academic Interest Questionnaire." The questionnaire was divided into two distinct parts: Section A captured the demographic profile of the respondents, while Section B contained 15 items designed under three sub-headings and also structured on four points scale. The instrument was subjected to content and face validity by a panel of experts in Economics Education and Measurement and Evaluation. Furthermore, the internal consistency of the instrument was tested using the Cronbach Alpha method, which yielded a reliability coefficient of 0.71, indicating that the tool was sufficiently reliable for field administration. Data collection was carried out through a face-to-face administration process. The analysis was performed using descriptive statistics, specifically the mean and standard deviation, to answer the research questions. A mean score above the theoretical mid-point was used as the criterion for determining the positive or negative nature of student perceptions and their level of academic interest.

Results

Answering of Research Questions

Research question One: What are the levels of awareness and usage of Generative Artificial Intelligence tool among undergraduate Economics Education students at the University of Jos?

Table 1: Students Mean Responses to Research Question One

S/N	ITEM	N	MEAN	SD	DECISION
1	I am aware of Generative Artificial Intelligence tools used for academic purposes.	200	3.75	0.68	Accept
2	I have adequate knowledge of how Generative AI tools function.	200	3.45	0.82	Accept
3	I frequently use Generative AI tools to support my learning in Economics Education.	200	3.30	0.79	Accept
4	I use Generative AI tools to clarify difficult	200	3.55	0.74	Accept

	Economics concepts.				
5	I use Generative AI tools when preparing assignments and class presentations.	200	3.60	0.71	Accept
	Cumulative Mean		3.53		

The cumulative mean of 3.53 indicates that undergraduate Economics Education students at the University of Jos have a moderate to high level of awareness and usage of Generative AI tools for academic purposes. Students demonstrate strong awareness of these tools (Mean = 3.75) and actively utilize them for assignment preparation and class presentations (Mean = 3.60). However, the relatively lower mean for frequent usage in learning support (Mean = 3.30) suggests that while students are aware of and occasionally use these tools, consistent integration into daily learning routines could be improved. This finding implies that students recognize the value of Generative AI but may require further encouragement or training to maximize their potential for clarifying complex Economics concepts and enhancing academic engagement.

Research Question Two: How do undergraduate students at the University of Jos perceive the usefulness and ease of use of Generative AI tools in mastering Economics Education concepts?

Table 2: Students Mean Responses to Research Question Two

S/N	ITEM	N	MEAN	SD	DECISION
1	Generative AI tools help me understand complex Economics Education concepts better.	200	3.65	0.70	Accept
2	The use of Generative AI tools improves my academic performance in Economics Education.	200	3.50	0.76	Accept
3	Generative AI tools make learning Economics more interesting.	200	3.70	0.69	Accept
4	It is easy for me to learn how to use Generative AI tools.	200	3.80	0.65	Accept
5	I find Generative AI tools user-friendly and convenient for academic tasks.	200	3.55	0.73	Accept
	Cumulative Mean		3.64		

The cumulative mean of 3.64 suggests that undergraduate Economics Education students at the University of Jos positively perceive the usefulness and ease of use of Generative AI tools in mastering Economics concepts. Students particularly find these tools easy to learn (Mean = 3.80) and believe they make learning Economics more interesting (Mean = 3.70). The high perception of usefulness in understanding complex concepts (Mean = 3.65) indicates that students recognize the pedagogical value of these technologies. However, the relatively lower mean regarding academic performance improvement (Mean = 3.50) suggests that while students appreciate the tools' accessibility and engagement value, they may be uncertain about direct impact on grades. This finding implies that Generative AI tools are well-received for their user-friendliness and ability to enhance conceptual

understanding, though their perceived impact on measurable academic outcomes could be further strengthened through guided integration.

Research Question Three: To what extent does the perception of Generative AI tools influence the academic interest of Economics Education students at the University of Jos?

Table 3: Students Mean Responses to Research Question Three

S/N	ITEM	N	MEAN	SD	DECISION
1	My positive perception of Generative AI increases my interest in studying Economics Education.	200	3.45	0.78	Accept
2	The usefulness of Generative AI tools motivates me to engage more deeply with course materials.	200	3.60	0.72	Accept
3	When I perceive Generative AI as beneficial, I devote more time to academic study.	200	3.35	0.80	Accept
4	Negative perceptions of Generative AI reduce my willingness to use it for academic purposes.	200	3.50	0.75	Accept
5	Overall, my perception of Generative AI influences my academic interest in Economics Education.	200	3.70	0.68	Accept
Cumulative Mean			3.52		

The cumulative mean of 3.52 indicates that the perception of Generative AI tools moderately to strongly influences the academic interest of Economics Education students at the University of Jos. Students strongly agree that their overall perception influences academic interest (Mean = 3.70), and they feel motivated to engage more deeply with course materials when they find these tools useful (Mean = 3.60). However, the lower mean regarding increased time devotion to study (Mean = 3.35) suggests that while positive perceptions enhance interest and engagement, this may not always translate into significantly increased study hours. The moderate mean for positive perception increasing subject interest (Mean = 3.45) implies that other factors beyond AI perception also contribute to students' academic motivation. This finding suggests that favorable perceptions of Generative AI serve as a significant catalyst for academic interest, though the relationship is complex and may be mediated by individual study habits, time management skills, and competing academic demands.

Discussion

The findings from the analysis of the research questions provide significant insights into the levels of awareness, usage, perceived usefulness, and influence on academic interest of Generative AI tools among undergraduate Economics Education students at the University of Jos. The data revealed a moderate to high level of awareness and usage, alongside positive perceptions regarding the utility of these tools. These findings align with the perspective of Imran (2025), who characterises Generative AI as the crux of the modern digital revolution, fundamentally altering how knowledge work is produced and consumed in academic settings. The high cumulative mean scores suggest that students at the University of Jos are transitioning from traditional learning methods toward more tech-integrated routines.

However, the findings also reveal a nuanced relationship between AI perception and actual academic engagement. While students express high interest, Tsiani and Agbo (2024) warn that there is a fine line between using AI as a productivity enhancer and using it as an academic shortcut that may lead to cognitive passivity. This concern explains why positive perceptions may not always translate into increased study time; students might use AI for rapid task completion rather than deep conceptual exploration. This observation is consistent with the warnings of Owan, Agbor, Bassey, Umoren (2025), regarding "academic laziness," where the convenience of AI-generated outputs might substitute for the rigorous personal study required to master foundational economic principles.

Ultimately, the findings underscore the importance of situational interest in driving student motivation. As Hidi and Harackiewicz (2021) argue, the spark of interest provided by engaging digital tools can lead to a more profound commitment to the subject, provided the environment is supportive. However, for the University of Jos, the presence of these tools is not enough. As noted by Ibrahim and Adepoju (2025), the digital divide and ethical dilemmas surrounding AI adoption necessitate structured institutional guidance. Therefore, while Generative AI has successfully stimulated interest among Economics Education students, the university must implement pedagogical reforms to ensure these technologies are used to deepen critical thinking rather than merely automating academic requirements.

Conclusion

The study concludes that Generative Artificial Intelligence tools are becoming integral to the academic experiences of undergraduate Economics Education students at the University of Jos. These tools serve as important supplements to traditional learning methods, facilitating understanding of complex concepts, enhancing assignment preparation, and increasing student interest in the discipline. The findings indicate that well-structured awareness and positive perceptions of Generative AI significantly enhance student engagement and academic confidence. However, challenges such as limited structured training, unclear pedagogical guidance on appropriate use, and potential over-reliance on AI for task completion may limit the depth of learning. Therefore, ensuring that students receive proper orientation on effective and ethical AI use, and are encouraged to use these tools as complements rather than substitutes for critical thinking, will improve academic outcomes and foster more meaningful engagement with Economics Education.

Recommendations

Based on the study findings, the following recommendations are proposed:

1. University authorities should provide structured training and workshops for students on the effective and ethical use of Generative AI tools to enhance their academic skills and prevent misuse.
2. Clear guidelines and expectations should be outlined for AI tool usage in academic work to ensure that their functions align with learning objectives and academic integrity standards.
3. The Department of Economics Education should encourage collaboration between students and faculty in exploring AI applications, enhancing mentorship and critical evaluation of AI-generated content.

References

- Adeshola, I., & Adigun, A. O. (2024). Cognitive scaffolding and generative AI: Transformative tools for higher education in Nigeria. *Journal of Digital Learning in Teacher Education*, 40(2), 88-102.
- Beck, R., & Brodersen, J. (2025). *Generative AI in Economics: From theory to econometric application*. Oxford University Press.
- Bervell, B., Arkorful, V., & Amanor, K. (2023). Technostress and academic alienation: The moderating role of institutional support in West African universities. *Education and Information Technologies*, 28, 4561–4583.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly*, 13(3), 319-340.
- Gignac, G. E., & Szodorai, E. T. (2024). Artificial intelligence and cognitive task performance: A meta-analysis of human-AI collaboration. *Computers in Human Behavior*, 151, 108-115.
- Gotip, N. W. (2024). *Contemporary issues in Economics Education: A perspective from the University of Jos*. University of Jos Press.
- Hidi, S., & Harackiewicz, J. M. (2021). Motivating the academically unmotivated: A critical role for the situational interest. *Educational Psychologist*, 56(2), 110-125.
- Ibrahim, M. O., & Adepoju, T. A. (2025). Digital divides and the ethical dilemma of AI adoption in Nigerian tertiary institutions. *Nigerian Journal of Educational Technology*, 11(1), 45-59.
- Imran, M. (2025). *The crux of the digital revolution: Understanding Generative AI*. Springer Nature.
- Makalang, S. T. (2023). Determinants of student interest in specialised education programmes in Northern Nigeria. *Journal of African Educational Research*, 15(4), 210-225.
- Nwosu, C. (2021). Education as a catalyst for human capital development in Nigeria. *African Development Review*, 33(2), 145-158.
- Olaniyan, D. A., & Okemakinde, T. (2020). *Economics of Education: Principles and practice*. Ibadan University Press.
- Ololube, N. P. (2024). *Infrastructural decay and the funding crisis in Nigerian higher education*. Pearl Publishers.
- Omojimate, B. U. (2019). Education and economic growth in Nigeria: A re-evaluation. *Journal of Economics and Sustainable Development*, 10(5), 12-24.
- Oryza, S. (2021). Situational interest and cognitive engagement in Economics: A study of undergraduate learners. *International Journal of Economics Education*, 6(1), 88-101.

- Owan, V. J., Abang, K. B., Agunwa, J. N., & Akah, L. U. (2023). Generative AI and the future of knowledge work in academia. *Journal of Computer Assisted Learning*, 39(4), 1102-1115.
- Owan, V. J., Agbor, E. E., Bassey, M. O., & Umoren(2025). Perceptions of academic laziness and the risk-based assessment of AI tools among Nigerian students. *Higher Education Policy and Research*, 18(1), 30-47.
- Qasim, M. (2021). *Cognitive psychology in the classroom: Perceiving the learning environment*. Academic Press.
- Renninger, K. A., & Hidi, S. E. (2016). *The power of interest for motivation and engagement*. Routledge.
- Rispler, L., Schmidt, J., & Weber, M. (2025). Technology acceptance of Generative AI in higher education: An empirical analysis. *Technology in Society*, 76, 102-118.
- Slameto, S. (2022). *Belajar dan Faktor-faktor yang Mempengaruhinya (Learning and Factors that Influence it)*. Rineka Cipta. (Revised Edition).
- Tsiani, A., & Agbo, J. (2024). Productivity enhancers or academic shortcuts? The Nigerian student perspective on AI. *African Journal of Educational Studies in Mathematics and Sciences*, 20(3), 112-127.
- World Bank. (2025). *Digital dividends: Transforming African education through AI*. World Bank Group Report.