

The Impact of Demographic Factor on Artificial Intelligence (AI) Engagement and Academic Results: A Study of Gaziantep University Students

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Abstract

One of the most prominent modern technologies that has increasingly played an important role in higher education is Artificial Intelligence (AI). The usage of AI tools such as ChatGPT, Quillbot, and other AI rising noticeably among undergraduate students around the world to complete academic tasks, raising essential questions about their impact on academic performance. This study aims to analyze the role of demographic factors in shaping students' awareness and understanding of AI, and the implications for their academic achievement. The sample of this study is the students at the Gaziantep university, the Faculty of Economics and Business Administration in Al Bab Campus.

Keywords: Artificial Intelligence (AI), Academic, Undergraduate Students, Performance.

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1. Introduction

One of the most transformative technological advancements in the 21st century is the development of Artificial Intelligence. The first presentation of AI happened during a Dartmouth College conference in 1956 which led to the current advanced systems. AI technology has evolved from expert systems that use rules to the present-day sophisticated machine learning models. Through AI tools it becomes possible to process languages while recognizing visual patterns and making future predictions. AI tools have achieved widespread usage in education as well as finance and healthcare systems and transportation applications (Russell & Norvig, 2021).

The academic sector at universities has witnessed an increase in artificial intelligence implementation throughout the education field (Lohana & Roy, 2023). Higher education institutions choose to adopt AI technology because of the multiple advantages this technology brings to their educational operations (Kiburu et al., 2023). AI enables graduate students to access explanations for concepts while also performing assignment writing along with project work and dissertation or thesis creation as well as PowerPoint preparation and equation calculations (Drazich et al., 2023). Different AI platforms like ChatGPT and Quillbot face challenges that emerge during their use in higher education systems (Pillai et al., 2023). The impact of using AI platforms in academic activities at universities will vary among graduate students based on their demographic characteristics together with the benefits and challenges of these systems.

AI functions as an educational tool which delivers instant feedback together with customized material to advance student learning alongside their critical thinking capacity and writing capabilities (Holmes et al., 2022). Research indicates that students who apply AI tools properly demonstrate enhanced assignment quality and better academic engagement according to multiple studies (Zawacki et al., 2019). Through natural language processing-based tools students receive assistance to rework confusing concepts while receiving grammar corrections and better argument structure which results in improved academic writing outcomes.

However, the factors such as students' digital literacy, their understanding of ethical boundaries, and their ability to critically evaluate AI generated contents mediate the outcomes of AI (Bano et al., 2023). AI affects students in two different ways. Some students may become more independent learners, while others may become overly dependent on AI, reducing their ability to think creatively and conduct independent research, especially when students directly submit AI answers without comprehension. (Cotton et al., 2023).

The demographic background also has an impact on how students use AI tools. Factors such as age, gender, field

of study and academic level can influence how students perceive and use AI tools (Smutny & Schreiberova 2020). Therefore, understanding the relationship between AI usage and academic performance requires a multidimensional approach which consider not only usage frequency but also the quality, purpose, and context of AI engagement. This study will examine the demographic characteristics and the factors that affect the usage artificial intelligence in higher education.

2. Literature Review

Aldreabi et al. (2025) determined what influences higher education students to adopt generative AI tools and how these tools affect their academic performance. The results of the showed that effort expectancy together with supplemental academic resources availability strongly influenced students' intention to use GenAI tools while hedonic motivation together with perceived accuracy showed insignificant effects. The authors propose that educational institutions must develop better usability features and comprehensive support systems to promote the successful adoption of GenAI tools in academic environments.

Kamau (2025) investigated how generative artificial intelligence (GenAI) influences academic performance through smart learning environments by analyzing survey data from 456 students using partial least squares structural equation modelling (PLS-SEM). The analysis demonstrated GenAI produces positive impacts on smart learning environments ($\beta = 0.523$, $p < 0.001$) as well as academic performance ($\beta = 0.387$, $p < 0.001$). The mediation analysis showed a partial effect that did not reach statistical significance which indicates GenAI affects academic success through both direct and indirect pathways via improved learning environments, but the indirect route shows limited empirical support.

Fan, Deng, and Liu (2025) investigated the educational effects of generative artificial intelligence on the learning and performance of 148 engineering students from China while examining its influence on efficiency, creativity, and academic results. The survey demonstrated that more than half of participants experienced enhanced efficiency together with increased initiative and creativity and better independent thinking abilities because of GenAI. The study found that half of the students did not experience any improvement in their academic grades while many expressed doubts about the precision of GenAI-generated content in technical areas. Studies show that GenAI technology leads to improved educational techniques, yet these benefits do not automatically produce superior academic performance, so students need to exercise carefully when using AI tools for specialized subject matter.

Weeks et al., (2024) investigated the evolving role of generative artificial intelligence within higher education while recognizing its capacity to assist but potentially disrupt standard academic operations. AI applications transform educational methods through their adaptive learning capabilities which also simplify assessment procedures and create individualized feedback systems. The authors expressed concern about unregulated AI deployment because it establishes fresh ethical dilemmas while creating dependence risks and threatens academic integrity. Universities need to create effective regulatory systems together with AI education programs which teach faculty members and students about AI to reach proper implementation and long-term educational value.

Diao et al. (2024) performed a meta-analysis of 27 studies which included 33,833 participants to discover essential elements that affect college students' intention to use generative AI. The study found that performance expectancy ($r = 0.389$) along with positive attitudes toward GenAI ($r = 0.576$) served as the strongest predictors for usage intention. The research revealed that geographical location determined user effort expectancy and habitual use patterns, yet gender identity created differences in GenAI user attitudes. The research shows that students will adopt GenAI technology based on their beliefs about its value together with their overall attitude toward it so educational institutions need to develop culturally sensitive intervention methods which will establish equal access to GenAI technology for educational use.

Azzam and Abdel-Jalil (2024) conducted a sociological study to examine students' attitudes toward the use of artificial intelligence (AI) in education at Al-Azhar University. Utilizing a descriptive analytical methodology, the researchers surveyed a randomly selected sample of 301 male and female students from various scientific faculties using a structured 27-item instrument divided into three thematic dimensions. The findings revealed widespread student agreement on the educational value of AI, particularly its ability to support diverse learning styles and foster self-directed learning. The participants also demonstrated overall acceptance of AI integration into educational processes. However, electronic devices, insufficient training in AI applications, and limited peer collaboration were some of the several challenges that were identified. There were not statistically significant differences based on gender, academic field, or study level. This study highlights both the perceived benefits and

practical limitations that may affect student engagement with AI technologies in educational contexts.

The study conducted by Atadika, Anim, and Segbenya (2024) examines how demographic characteristics affect major AI use antecedents which include platform patronization alongside usage and perceived benefits and encountered challenges in higher education graduate students. A positivist quantitative explanatory research approach was used to collect data from 294 graduate students through stratified random sampling before analyzing it with descriptive statistics, t tests and ANOVA. The research discovered important differences between genders regarding AI adoption as well as perceived benefits because males and females showed distinct patterns in their usage of ChatGPT and Quillbot along with their respective outcomes. The study identified differences in AI usage and benefits and challenges which varied according to students' academic programs and levels because education students showed higher AI usage and benefits, but more challenges compared to business students and first- and third-year students had stronger appreciation of AI than other students. The study demonstrates how demographic elements strongly influence AI participation in higher education while recommending university policymakers and HR managers develop AI-support strategies through gender-specific approaches and program-based training to address these differences.

Tin et al. (2024) explored how different demographic characteristics influence university students' views about artificial intelligence (AI) while assessing their effects on academic achievement. Through an extensive multi-institutional survey the researchers evaluated student responses which were divided according to age groups and gender identities and academic disciplines and socioeconomic backgrounds as well as academic years. The research demonstrated that demographic aspects strongly affected how students viewed AI and that the students with better economic backgrounds showing more positive attitudes and higher self-assessed AI tool capabilities. The research demonstrated that students with positive AI attitudes demonstrated better GPA results, yet this connection varied between different demographic segments. Research shows that the distribution of benefits from AI integration is uneven because of existing demographic gaps. The research points out that AI-based learning needs to consider student demographic differences for achieving equal academic results and proposes specific support for students who face disadvantages or resistance to AI technology.

The study by Ward (2024) used mixed methods to analyze how AI tools affect student learning behaviors and academic results through their personal GPA assessments. The study results indicated that students who used AI tools reduced their study time while achieving better academic results according to their higher GPA scores. Students found success through AI-based personalized learning, but they expressed concerns about tool reliance and difficulties when using AI tools within traditional educational practices. The study finds that AI brings academic benefits, yet schools must establish correct integration methods for AI within their existing teaching systems to prevent students from becoming overly reliant on technology.

Vieriu and Petrea (2023) combined quantitative frequency and percentage analysis with thematic qualitative evaluation through their mixed-method research to study artificial intelligence impacts on student academic development. The study discovered various important benefits which stem from using artificial intelligence in educational environments because it enables personalized learning approaches and boosts student engagement and improves academic performance. The investigation showed that AI technology created major threats which led to student dependence on AI tools and academic cheating and reduced their capacity to think critically. The research indicates that AI technology delivers substantial benefits for educational improvement yet creates moral dilemmas which demand institutional bodies to establish effective oversight systems.

Khalaf (2023) did a descriptive field study to figure out the role of artificial intelligence (AI) applications in enhancing educational and pedagogical skills. Based on data collected from a convenience sample of 140 university faculty members, the results indicated that while perceptions of AI's priority in education were moderate, a significant number of respondents believed that AI applications contribute more effectively to the development of teaching and learning skills than traditional methods. Participants pointed out AI's role in making educational experiences more interactive and engaging. However, the risks associated with cybersecurity threats and virus propagation in AI-driven systems were identified as notable concerns. The results indicated that there are not any statistically significant differences in perceptions of AI's educational role based on age and years of experience.

3. Research Methodology and Conceptual Framework

3.1 The Sample of the Study

The aim of this study is to examine the impact of demographic factors on knowledge and attitudes toward AI, as

well as the relationship between those factors and academic performance. The sample of the study comprises 171 undergraduate students enrolled in 4 departments of the Faculty of Economics and Business Administration at The Al-Bab Campus.

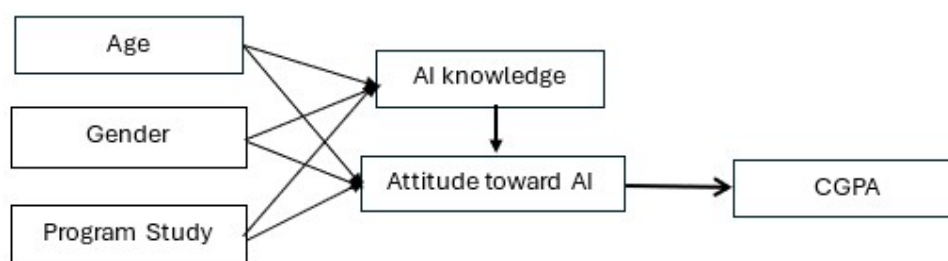
3.2 Sampling Method

The study utilizes dual sampling methods including convenience sampling and simple random sampling. The research used convenience sampling, as students at this location were both available and relevant for the study's purpose. The simple random sampling was applied to provide every student equal selection probability which decreased selection bias.

3.3 Conceptual Framework

The diagram shows the proposed mediation model which demonstrates how demographic characteristics influence academic performance. The framework operates on the belief that demographic variables create academic results through direct effects and indirect effects which stem from cognitive and attitudinal factors.

Diagram 1: The Conceptual Framework



3.4 Data Collection Method

The questionnaire method was used as primary data collection tools to gather data on students' perspectives regarding AI usage at Al-Bab Campus. The questionnaire included three sections. The first section includes five questions, four of them about demographics and one about the CGPA of the students to determine their academic performance. The second section included 12 questions to assess the knowledge of AI, and the third section included 8 questions to assess attitudes toward AI. All the questions in section two and section three were designed with a 5-point Likert scale.

3.5 Hypothesis and Data Analysis

The collected data were analysed using SPSS v.27 and Amos v.26 to perform demographic data analysis, followed by reliability analysis, correlation analysis, and linear regression. A research method investigates the relationship between the variables to determine their linear association strength. The path analysis technique within AMOS software serves to analyse the order of relationships between A, B, C and D variables. The complete analysis examines how B acts as a mediator between A and C and reveals both direct and indirect paths present in the model. The PROCESS macro combined with path analysis enables researchers to study complex variable relationships and reveal theoretical framework mechanisms.

The hypotheses that were examined to investigate the direct and indirect effects using SPSS and AMOS statistical software were as follows:

- H1:** A relationship existed between age and AI knowledge.
- H2:** A relationship existed between program study and AI knowledge.
- H3:** A relationship existed between gender and AI knowledge
- H4:** A relationship existed between gender and Attitude towards AI.
- H5:** A relationship existed between program study and attitude towards AI.
- H6:** A relationship existed between age and attitude towards AI.
- H7:** A relationship existed between AI knowledge and attitude towards AI.
- H8:** A relationship existed between attitude towards AI and CGPA.

- H9:** AI knowledge has a significant mediating effect in the relationship between gender and attitude toward AI.
- H10:** AI knowledge has a significant mediating effect in the relationship between program of study and attitude toward AI.
- H11:** AI knowledge has a significant mediating effect in the relationship between age and attitude toward AI.
- H12:** Attitude towards AI has a significant mediating effect in the relationship between gender and CGPA.
- H13:** Attitude towards AI has a significant mediating effect in the relationship between program study and CGPA.
- H14:** Attitude towards AI has a significant mediating effect in the relationship between age and CGPA.
- H15:** Attitude towards AI has a significant mediating effect between between in the relationship between AI knowledge and CGPA.
- H16:** Attitude towards AI and AI knowledge have a significant mediating effect in the relationship between Gender and Academic Performance.
- H17:** Attitude towards AI and AI knowledge have a significant mediating effect in the relationship between program Study and Academic Performance
- H18:** Attitude towards AI and AI knowledge have a significant mediating effect in the relationship between Age and Academic Performance

4. Results and Discussion

4.1 The Sample of the Study and demographic of participants

A total of 171 undergraduates at Al-Bab Campus participated in the study, providing their demographic information. The questionnaire included 20 questions in total: 5 on demographics, 12 on AI knowledge, and 8 on attitudes toward AI. Table 1 summarize the information of the study's sample.

Table 1: Demographic Characteristics of Participants

Characteristics	No of respondent	Percentage (%)
Gender		
Male	120	70.2
Female	51	29.8
Age		
Less than 20	13	7.6
21–25	82	48.0
26–30	38	22.2
More than 30	38	22.2
Program Study		
Business Administration	43	25.1
Economics	36	21.1
International trade and logistics	39	22.8
Political Science and Public Administration	53	31.0
Year of Study		
First Year	40	23.4
Second Year	67	39.2
Third Year	20	11.7
Fourth Year	44	25.7

4.2 Reliability Analysis

Before employing linear regression and other analysis, Cronbach's alpha reliability test was conducted to examine the test reliability results as shown in Table 2. The category-level results (AI Knowledge and Attitude toward AI) and the overall results were significant, confirming that the questionnaire achieved acceptable to good reliability, with coefficients between 0.760 and 0.888.

Table 2: Reliability Scores of Questionnaire Items

Questionnaire items section	Cronbach's alpha	Number of items
AI knowledge	0.882	12
Attitude towards AI	0.721	8
Overall	0.888	20

4.3 Correlation Analysis

The relationships between demographic factors (age, gender, and program of study), AI knowledge, attitudes toward AI, and CGPA were examined by correlation analysis as shown in Table 3. The results show that age has almost no relationship with AI knowledge ($r = 0.014$) and attitudes toward AI ($r = -0.024$). In the same way, gender has a very slight and non-significant negative relationship with both AI knowledge ($r = -0.047$) and attitudes toward AI ($r = -0.012$). The program of study also demonstrates a weak negative association with AI knowledge ($r = -0.100$) and attitudes toward AI ($r = -0.121$), but these relationships are not statistically significant.

Table 3: Results of the Pearson Correlation Analysis

	AI Knowledge	Attitude towards AI	CGPA
Age	0.014	-0.024	0.200**
Gender	-0.047	-0.012	0.219**
Program study	-0.100	-0.121	
AI Acknowledge	1	0.704**	
Attitude toward AI		1	0.039

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

Additionally, the results reveal a strong and statistically significant positive relationship between AI knowledge and attitudes toward AI ($r = 0.704$, $p < 0.01$), indicating that students with higher levels of AI knowledge tend to have more positive attitudes toward AI. The relationship of CGPA with both AI knowledge ($r = 0.039$) and attitudes toward AI ($r = 0.039$) is very weak and non-significant, suggesting that neither students' knowledge of AI nor their attitudes toward it are related to their academic performance. As a conclusion, while demographic variables do not significantly influence AI knowledge or attitudes, AI knowledge itself plays an important role in shaping students' attitudes toward AI. Academic performance, on the other hand, appears unrelated to either AI knowledge or attitudes.

4.4 Direct and Indirect Effect

The direct and indirect effect results presented in Table 4 indicate that AI Knowledge does not significantly mediate the relationship between age and attitudes toward AI, as the indirect effect is 0.005 with a 95% confidence interval of $[-0.521, 0.508]$. Consequently, H11 is not supported and therefore rejected. Similarly, AI Knowledge doesn't have a significant mediator role between gender and attitudes toward AI, with an indirect effect of -0.404 and a 95% confidence interval of $[-1.419, 0.618]$. Likewise, the mediation of program of study on attitudes toward AI through AI Knowledge was also not significant, as the indirect effect is -0.345 and a 95% confidence interval of $[-0.845, 0.083]$. Accordingly, H12 and H13 are also rejected.

Table 4: Direct And Indirect Effects with Bootstrap 95% Confidence Interval for Mediation Analysis

Predictor	Mediator	Dependent Variable	Direct Effect	Indirect Effect (95% CI)
Age	AI Knowledge	Attitude toward AI	-0.870	- 0.138 (-0,824, 0,516)
Gender	AI Knowledge	Attitude toward AI	-0.996	- 0.534 (-1.771, 0.706)
Program Study	AI Knowledge	Attitude toward AI	-0.815	0.346 (-0.219, 0.941)
Age	Attitude toward AI	CGPA	0.102	0.001 (-0.012, 0.006)
Gender	Attitude toward AI	CGPA	0.279	0.001 (-0.009, 0.022)
Program Study	Attitude toward AI	CGPA	0.001	-0.001 (-0.011, 0.004)
AI Knowledge	Attitude toward AI	CGPA	0.002	0.002 (0.008, 0.010)

The results further show that the mediating effect of Attitudes toward AI between age and CGPA was non-significant, with an indirect effect of -0.138 and a 95% confidence interval of $[(-0,824, 0,516)]$. Gender also did not significantly affect CGPA through Attitudes toward AI, showing an indirect effect of -0.534 and a 95% confidence interval of $[-1.771, 0.706]$. Similarly, program of study showed a non-significant negative indirect effect on CGPA via Attitudes toward AI (IE $=1.771, 0.706, 95\% \text{ CI } [-0.219, 0.941]$). Finally, AI Knowledge significantly influences CGPA through Attitudes toward AI, with an indirect effect of 0.002 and a 95% confidence interval of $[0.008, 0.010]$.

4.5 The Results of Mediation Model

Age, Gender, and Program of Study were included in the path analysis as shown in Table 5. The partial indirect effects were not statistically significant. Specifically, the mediation of age and CGPA through AI knowledge and attitude toward AI was not significant, hence, H18 is rejected. Similarly, the mediating effect of Attitude toward AI and AI Knowledge on the relationship between Gender and CGPA was not significant, leading to the rejection of H16. Finally, the mediating role of AI Knowledge and Attitude toward AI in the relationship between Program of Study and CGPA was also not significant. Thus, H17 is rejected.

Table 5 : Coefficients of the Mediation Model

	Estimate	S.E.	P	BootLCCI	BootULCI
Partial Indirect Effect					
AGE $\rightarrow$ AKW $\rightarrow$ ATA $\rightarrow$ CGPA	0.000	0.003	0.967	-0.006	0.006
Gender $\rightarrow$ AKW $\rightarrow$ ATA $\rightarrow$ CGPA	-0.002	-0.006	0.386	-0.024	0.006
PS $\rightarrow$ AKW $\rightarrow$ ATA $\rightarrow$ CGPA	-0.001	0.004	0.405	-0.014	0.003
Total Indirect Effect					
AGE $\rightarrow$ CGPA	-0.001	0.004	0.454	-0.016	0.004
Gender $\rightarrow$ CGPA	-0.001	0.008	0.520	-0.026	0.010
Program Study $\rightarrow$ CGPA	-0.002	0.006	0.420	-0.022	0.005

AKW: AI knowledge, ATA: Attitude towards AI, PS: Program Study

4.6 The results of the analysis and Hypothesis

The findings from the hypothesis testing revealed that the proposed relationships were not statistically supported. Based on the results in table 4, age, gender, and program of study showed no meaningful effect on AI knowledge with correlation values of 0.232 , -0.047 and -0.10 , which led to the rejection of H1, H2, and H3 hypotheses. These results for age and program of study are noteworthy because they run counter to the findings of Williams et al. (2019), who identified age as an important predictor of AI knowledge, as well as the results of Dashti et al. (2024), Ahmed et al. (2022), and Truong et al. (2023), who reported that field of study is an important factor in AI knowledge.

Additionally, neither gender nor program of study was significantly related to students' attitudes toward AI, with correlation values of -0.012 and -0.121 , respectively. These resulted in the rejection of the H4, H5, and H6 hypotheses. The results do not align with several earlier studies findings that reported demographic influences on

AI perceptions (Johansson et al., 2024; Turchioe et al., 2023; Pinto dos Santos et al., 2019; Dashti et al., 2024; Truong et al., 2023). Similarly, age showed no significant association with attitudes ($r = -0.024$), which is inconsistent with the findings of Williams et al. (2019) study.

The only strong and consistent result was the positive relationship between AI knowledge and attitudes toward AI with correlation value of 0.704^{**} and therefore the H7 hypothesis was accepted. By contrast, no significant relationship was observed between attitudes toward AI and CGPA as the correlation value was 0.039 , contradicting findings reported by Emon et al. (2023) and led to rejection of H8 hypothesis.

When mediation effects were tested as shown in table 5, the overall picture remained unchanged. AI knowledge did not serve as a mediator between gender and attitudes toward AI, with values of an indirect effect of -0.534 and a 95% confidence interval ranging from -1.771 to 0.706 . This result is inconsistent with Busch et al (2023) study that has found AI knowledge to be a significant mediator in this relationship. Similarly, AI knowledge did not mediate the relationship between programs of study and attitudes toward AI, with values of an indirect effect of 0.346 and a 95% confidence interval between -0.219 and 0.941 , or between age and attitudes toward AI, with an indirect effect of -0.138 and a 95% confidence interval between -0.824 and 0.516 . Consequently, the H9, H10, and H11 hypotheses were rejected.

Similarly, based on the results in table 5, attitudes toward AI did not mediate the relationships between gender and CGPA, with an indirect effect of 0.001 and a 95% confidence interval ranging from -0.009 to 0.022 ; program of study and CGPA, with an indirect effect of 0.001 and a confidence interval from -0.011 to 0.004 ; age and CGPA, with an indirect effect of 0.001 and a 95% confidence interval between -0.012 and 0.006 . Therefore, H12, H13 and H14 were rejected. However, The Hypothesis H15 was accepted as attitude toward AI mediate the relationship between AI knowledge and CGPA with an indirect effect of 0.002 and a confidence interval from 0.008 to 0.010 .

Based on the results in table 5 results and when AI knowledge and attitudes toward AI were examined together, no significant combined mediation effects were observed for gender and academic performance, with a 95% confidence interval ranging from -0.009 , 0.022 ; program of study and academic performance, with a confidence interval between -0.011 , 0.004 ; or age and academic performance, with a confidence interval between -0.012 and 0.006 . Accordingly, the H16, H17, and H18 hypotheses were rejected.

5. Conclusion

The research results deliver essential knowledge about how demographic elements connect with AI understanding and AI perspectives and academic achievement measured by CGPA. The research shows that the demographic elements have no direct link with AI knowledge and AI attitude which indicates researchers need to study these connections more thoroughly.

The study delivers important findings, yet several limitations need to be recognized. The sample size meets the requirements for an initial study but remains limited in size. The statistical power to identify small effects and the estimation precision will probably suffer because of this. The research sample consists of undergraduate students which restricts the ability to apply results to working professionals and older populations. These factors would produce subtle effects on how people understand AI and their opinions about artificial intelligence. Different cultural backgrounds and social economic positions determine who gets to use AI resources which shapes how people understand AI and what they think about it.

Future research needs to focus on solving these problems while expanding the study's research boundaries. Scientists need to perform studies with larger participant groups which represent various population segments to improve the study results' generalizability. The research would gain statistical power through this approach while it would also show better understanding of AI knowledge and attitudes toward AI. Scientists should study different aspects which the present research has omitted. People develop their views about AI through their cultural background. People who belong to different socioeconomic groups will experience various levels of access to AI resources which creates an unequal distribution of AI knowledge. Scientists can study how people understand AI and their attitudes toward artificial intelligence by conducting studies that track this data across extended periods of time. The research would monitor AI knowledge and attitude changes across time to study their influence on academic success. The analysis would show how these relationships change over time which would reveal the most important intervention points. Future studies can examine how personal traits affect the development of AI understanding and the formation of AI attitudes. The study should investigate whether people who embrace new experiences and those who need more cognitive challenges develop favourable opinions about

AI systems. The evaluation of these distinctive characteristics enables the development of customized methods which boost both AI understanding and positive AI attitude formation.

In conclusion, this study demonstrates how academic performance results from the combined effects of demographic elements and AI understanding and personal opinions about AI. The study results should alter how educational institutions use artificial intelligence in their teaching methods. The research demonstrates that these connections maintain intricate patterns which stem from various influencing elements. Scientists need to conduct additional research to understand these connections more deeply while studying them across multiple environments. Artificial Intelligence technology stands as a fast-growing research domain which presents numerous research prospects for upcoming investigations. The exploration of AI effects on human society remains in its early stages yet this study creates a useful foundation for future research.

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