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Research paper

Faculty Perceptions of Generative AI in Azerbaijani Higher Education

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ABSTRACT

The fast adoption of generative artificial intelligence (GAI) in higher education has led to the realization of the necessity to study the responses of educators as a professional group, although there is limited empirical research, especially in a new educational setting such as Azerbaijan. This pilot study is a quantitative investigation of the attitudes of Azerbaijani university teachers related to GAI, their adaptations in pedagogy, and the perceived difficulties and support requirements. The information was gathered through an online poll (n=30) in a university with a high level of research. Findings indicate that teachers are aware of the opportunities of GAI to personalize learning and administrative efficiency yet were rated moderately on AI literacy (Mean=3.42) and willingness to apply (Mean=3.21). Some of the key issues were academic integrity, the validity of assessment, and AI-assisted plagiarism. The exploratory analysis revealed that there was a good positive correlation between AI literacy and the perceived usefulness (r=0.759), where active adopters redesigned assessments and adopted process-oriented approaches. However, the conceptualization of institutional support was perceived to be inconsistent (Mean=3.04, SD=1.1). The results show that successful GAI implementation must involve contextualized professional growth and straightforward institutional policies that can resolve ethical and pedagogical issues. Although constrained by sample size, this research has given the first signs of the importance of educator-based support to facilitate responsible AI integration into the modernization of higher education.

Keywords: academic integrity, Azerbaijan, generative artificial intelligence, higher education

Artificial Intelligence (AI) has expanded rapidly across various sectors, including education and industry (Aithal & Maiya, 2023). Although some previous AI systems demonstrated the ability to support digital infrastructure, generative AI (GAI) marks a qualitative change in the level of technological competence and the interaction between a person and a machine (Pandey, 2024). This rapid rise of ChatGPT significantly accelerated global interest in generative AI, attracting millions of users within a short period (Kooli, 2023).

Later, applications like DALL-E, Midjourney, Microsoft Copilot and Google Gemini became users of GAI, allowing people to produce text, images, code, videos and simulations (Rozputnia et al., 2025). These functions make GAI a disruptive agent in the educational sector, as it could revolutionize the way knowledge is produced, learned, and academic labour (Lang et al., 2025). But concerns such as accuracy, bias, ethical implications, and hallucinated outputs remain significant challenges (Taimur, 2024). Teachers will thus be compelled to juggle the competing interests of innovation, ethics, and institutional demands in a fast-changing digital environment (Blankendaal et al., 2026).

GAI also pushes the limits of conventional beliefs regarding learning in higher education by undertaking activities that have historically been linked to human cognition (Jin et al., 2025). It has been shown that AI models such as ChatGPT may provide high-quality answers in any field, which brings up questions of assessment validity, academic integrity, and skills development (Sallam, 2023). With all the advantages, like a personalized learning experience, quick feedback, and increased creativity, integration is not simple. Schools all over the globe are changing their assessment framework, revising academic policies, and creating guidelines to assist pedagogical adjusting (Alam, 2022).

These are the world pressures experienced in Azerbaijan. Universities not only play a role as producers of knowledge but also as keepers of cultural identity and social values (Nuri et al., 2025). Despite the growth of digital transformation efforts, implementation of GAI is still not even (Pyra, 2021). The policies are frequently not well-developed at the institutional level, and the level of educator digital literacy differs, and purposeful professional growth is also constrained (Bjerg, 2024). With the alignment of universities with national modernization and internationalization objectives, the perception of educators takes on an important role in determining how the GAI will be adopted in curricula, assessment, and classroom practice (Li, 2024).

Mandate of educator inquiry

The literature on the use of AI in education focuses on student use, ethical concerns, and technical performance to a large extent, with little mention on the experiences of educators and their adaptation to pedagogy (Mouta et al., 2025). This is especially apparent in Azerbaijan, where empirical research on GAI is lacking yet increasingly institutional attention (Jamalova, 2025). To make sure that AI integration improves, rather than diminishes, the quality of teaching, its authenticity, and equity, it is important to understand the thoughts of educators. In this regard, the discussed pilot study examines the perception of higher education educators in Azerbaijan about GAI and its implications on their practice (Shakib et al., 2024). Being an investigative project, it seeks to establish new trends and shape the new studies in this underresearched field.

Importance of research

GAI presents higher education system opportunities and disruption such as academic integrity issues, assessment redesign, digital literacy, and pedagogical integration (Adamakis & Rachiotis, 2025). Teachers are the key actors in the process of decoding institutional policies, creating learning spaces, and upholding academic standards, and their views are essential to responsible use of AI (Omar, 2025).

This pilot study gives an initial understanding, on which policy making, professional education, and AI-based pedagogical models adapted in the Azerbaijani context can be based. It is exploratory but adds empirical data to the existing discussions of the necessity to improve the quality, authenticity, and equity of GAI (Arinushkina, 2024), as well as provides insights into a poorly represented educational environment.

Research gap

Although the GAI is widely used by students and its use raises more and more issues of concern, there is a paucity of empirical research that investigates the perceptions of teachers and their impact on pedagogical practice, especially in Azerbaijan (Tran et al., 2025). The current body of literature lacks information on how educators assess the opportunities and dangers of GAI, how these views influence assessment and pedagogy, ethical and accuracy management, and how these institutions can facilitate adaptation. The pilot study fills these gaps by using an exploratory quantitative study that can create first evidence and define variables to study more thoroughly.

Research questions

This paper examines the attitudes of educators towards the adoption of generative artificial intelligence (AI) in higher education. Among the key questions are: how educators see the application of generative AI in pedagogy and learning; what teaching methods or accommodations they make when applying AI to teaching; what issues, concerns, or opportunities they have when using AI in teaching; and what institutional resources or activities they consider important in supporting the effective and responsible application of AI.

Study objectives

The purpose of the investigation is to explore teachers' perceptions of generative AI and its uses in Azerbaijani higher education via a pilot study. It examines instructional practices and modifications implemented in response to AI, addresses issues about academic integrity, accuracy, ethical implications, and student dependence on AI, and develops early, evidence-based policies to help institutional policies and support systems adopt AI in higher education.

LITERATURE REVIEW

Artificial Intelligence and Higher Education

Generative artificial intelligence (GAI) has rapidly emerged and has fundamentally changed the academic conversation about digital transformation in higher education. In January 2022, when OpenAI publicly launched ChatGPT, it catalyzed the awareness of AI as an educational tool around the world. Since that point, educational institutions all over the world have been investigating the role of generative AI in spurring educational innovation while addressing the risks involved (Aliyev & Aliyeva, 2024).

In transitional regimes such as Azerbaijan, digital transformation has already been gaining momentum amid COVID-19, with an emphasis on modernisation of infrastructure, increased online education, and international conformity. In this agenda, AI has come to play a tactical role in institutional modernisation and competitiveness (Yener et al., 2023; Chaimongkol & Rattanakantadilok, 2026).

Artificial intelligence institutionalization

Colleges are starting to embrace AI to enhance educational and management processes. It is noted that AI-informed systems have the potential to aid adaptive and personalised learning, and the usage of intelligent tutoring systems, automated feedback systems, and social robotics is capable of developing more interactive learning experiences (Lampropoulos, Papadakis, 2025). Research also indicates that academic establishments can use AI-powered solutions to adapt to the ever-changing needs of the labour market, including by supporting the acquisition of skills (Thelma et al., 2024; Katz, 2026).

Reform in higher education in Azerbaijan has been actively made European Higher Education Area-oriented (EHEA), and policies on digital transformation promote technologies to enhance access, efficiency, and quality (Şahin, 2024). Nevertheless, the level of AI implementation in Azerbaijani institutions is not evenly distributed as compared to more state-of-the-art systems, and institutional readiness and systematization are still in progress.

Attitudes of faculty members toward generative AI

Regardless of that promise, studies continue to show divided faculty views on generative AI. Teachers often say that they are confused about the implications of pedagogy, worry that their training is insufficient, have more work than they want, and question whether it can be executed effectively (Mehdaoui, 2024; Tariq, 2024). Within a new educational context, where digital literacy differs significantly among faculty, the lack of professional development also adversely affects teacher confidence in AI-assisted teaching (Bouzaher, 2025).

Ethical issues are no less deep. The issue of academic dishonesty has become a primary concern, and researchers are concerned about whether learners can become excessively dependent on AI and whether it affects the importance of the learning process (Al-Amri, N. A., & Al-Abdullatif, A. M. (2024). The issues of AI-related assessment have also escalated, and researchers are concerned with the reliability of grading, algorithmic bias, and ethical considerations of automated assessment (Zacharis & Papadakis, 2025; Acar et al., 2025). Taken together, these results highlight that the effective implementation of AI requires not only available technology but also the views of educators, support at the institutional level, and ethical management.

Inequality and situational competency

Differences in adoption by educator demographics are well established throughout the world. Uptake is influenced by gender, professional experience, and digital confidence, and a small amount of research suggests that female teachers might describe their self-efficacy as lower with new technologies (Alwaqdani, 2025). Little information on these trends exists in empirical studies in Azerbaijan.

Adoption is further complicated by language and culture. The majority of AI applications are trained on English-language data, thus impairing the quality of the results in a multilingual space. As Azerbaijani universities run in Azerbaijani, Russian, and English, these language differences may have a direct impact on the credibility of AI-generated material (Mohamed, 2026). The argument of these contextual realities suggests that it is not possible to apply globally generalised assumptions to local educational contexts.

Pedagogical opportunities

Regardless of the challenges, there is an increasing body of literature that reveals significant opportunities. ChatGPT-like bots have also proven helpful in creative problem-solving, content generation, and facilitating more interactive teaching methods. In STEM fields specifically, generative AI has been demonstrated to assist educators with the creation of new teaching strategies and enhancing student engagement (Uğraş et al., 2024). The ability of AI to personalise learning and assist instructors in customising the learning content to the needs of various students is mentioned in other studies (Adeleye et al., 2024; Rajagopal et al., 2024; Rahimov & Karimova, 2025; Gjini & Hernandez-Gantes, 2025). These opportunities are in line with the wider educational reform objectives of inclusive, flexible learning (Larguet, 2025) in Azerbaijan, but their actualisation is contingent on the willingness of educators and decent institutional frameworks.

Azerbaijan's reform context

Higher education in Azerbaijan actively modernises, being increasingly digitalised and seeking to increase partnerships abroad. Universities are implementing online systems, enhancing digital infrastructure, and testing new learning technology (Yener et al., 2023). However, generative AI puts pressure on infrastructure as well as demands. Educators need to acquire advanced digital skills, and the policies of institutes in AI are still in an early stage, and official training courses are few (Bjerg, 2024). Practically, generative AI has a high likelihood of success because it is being tapped and explored by many university instructors alone.

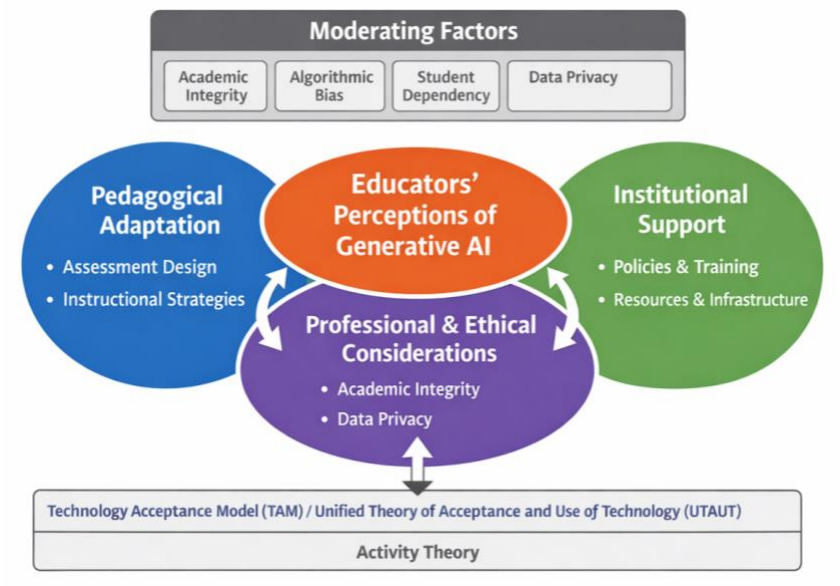
Theoretical framework

The present research is based on the Technology Acceptance Model (TAM) and Unified Theory of Acceptance and Use of Technology (UTAUT) to learn the ways faculty use to evaluate and use generative AI (Hewavitharana et al., 2021). TAM foregrounds that usefulness and perceived ease of use are the major technology acceptance drivers. UTAUT goes a step further to include social influence and facilitate conditions, i.e., institutional peer support of AI use and the availability of sufficient resources and training (Haroud & Saqri, 2025). These theories are complemented by the Activity Theory, placing teaching as a multi-layered, intricate process with a range of relationships among the educators, students, the policies of the institution, technology, and societal needs (Nazim & Alzubi, 2025). Generative AI, in this light, is a mediating artefact that can change the practice of instruction, assessment design, and professional identity.

The combination of these views informs the conceptual model used in the study to place the educator attitudes in relation to generative AI within three mutually dependent dimensions: pedagogical adaptation, professional and ethical considerations, and institutional support. Digital literacy, disciplinary background, and previous experience with technology influence how faculty members view the advantages and dangers of AI (Mohammed, 2025), subsequently affecting key decisions regarding redesigning assessments, monitoring the use of AI with students, and integrating technology. These decisions are mediated by worries about academic integrity, data privacy, algorithm bias, and over-reliance by the student (Ahmed, 2024), and supported by structural conditions of responsible adoption by institutional policies and professional development programmes (O'dea, & O'Dea, 2023).

Figure 1

Conceptual model illustrates the relationships between AI literacy, perceived usefulness, perceived risk, institutional support, and faculty willingness to adopt generative AI in higher education.



METHODS AND MATERIALS

Study design and approach

This paper examines an exploratory pilot study to analyze the perception, practice, and intent of educators when it comes to the adoption of generative artificial intelligence (GAI) within higher education. Since the integration of GAI was in its initial phases in Azerbaijan universities and there were no empirical benchmarks, the pilot approach was favorable to produce first insights and measure its appropriateness. The design experimentally evaluated the main psychological and institutional constructs, such as AI literacy, perceived usefulness, perceived risk, willingness to adopt, assessment change intentions, and perceived institutional support. The data were gathered at one stage through an online survey conducted in one of the large research-based institutions in Azerbaijan. Being initial research, the research focuses on defining new patterns and relationships to guide future extensive studies and formulating new hypotheses as opposed to testing them.

Pilot study justification of sample size

Pilot studies in social and educational research are normally characterized by small samples that are used to determine viability, narrow instruments, and preliminary findings, but not generalizability. According to methodological guidelines, 2040 participants will be an enough sample to test the clarity of the surveys, the variability of the responses, and possible relationships between the variables. In this connection, it was found that a sample of 30 teachers in the university was sufficient. The results are therefore preliminary and lay the groundwork for further, more intensive studies on GAI integration in higher education.

Measurement and survey instrument

The structured online questionnaire that was created in Qualtrics was used to collect data. In this instrument, there were 7 demographic items and 20 closed-ended questions that assessed six constructs, namely AI literacy, perceived usefulness, perceived risk, willingness to use GAI tools, assessment change intentions, and perceived institutional support. The constructs were all measured with 5-point Likert scales (1 = strongly disagree to 5 = strongly agree), and the previous AI use was measured with binary (yes/no) items. The questionnaire was based on and modified from technology acceptance scales, which were proven to be valid and adapted to the GAI situation. The reviews of the items were carried out in terms of clarity, relevance, and face validity. It was all voluntary, and nothing was obligatory.

Measurement scales reliability

The alpha of Cronbach was used to assess the internal consistency of the constructs. The reliability of all scales was satisfactory and over the 0.70 mark. In particular, alpha values were 0.82, 0.79, 0.76, 0.81, and 0.78 in

the AI literacy, perceived usefulness, perceived risk, willingness to adopt, assessment change intention, and institutional support, respectively. These findings verify that there is sufficient reliability and justify the instrument to be used in exploratory analysis.

Quantitative data analysis

Python 3.x and Microsoft Excel were used in all the statistical calculations. The assessment used six major points to analyze the connections between faculty characteristics, AI literacy, and disposition towards generative AI adoption.

Statistical analysis

The descriptive statistics were also used to summarize the demographic and perceptual variables and gave insight into the characteristics of the sample in terms of means, standard deviations, minimum, maximum, quartiles, and frequency distributions. Pearson correlation coefficients were also computed as a measure of bivariate relationships between modifications of AI literacy and specific constructs, such as perceived usefulness, perceived risk, willingness to adopt, assessment change intention, and institutional support. The presence of differences in AI literacy, perceived usefulness, and willingness to adopt by faculty affiliations was investigated using single-way ANOVA, and initial patterns were found between groups. To assess the impact of the variables AI literacy, perceived risk, and institutional support on intentions to use generative AI, multiple linear regression analysis was performed, and the effects were interpreted using regression coefficients, standard errors, t-values, and p-values. The chi-square test of independence was used to evaluate the relationship between gender and the desire to utilize the generative AI tools. Since the pilot study was mainly exploratory and the sample size was relatively small, the analysis was centered on descriptive and bivariate patterns, which indicated rather than concluded.

Sample characteristics

The collection of the data took place in the first semester of the 2023 academic year (May-July). The end analytical sample was 30 faculty members in 20 different faculties. The highest representation was from the Faculty of Education (n = 3), followed by the Engineering, Social Sciences, and Computer Science. The majority of the participants were tenured (73.3%, n = 22) with more than 10 years of teaching experience (76.7, n = 23). The gender ratios were equal (female: 50, n =15, male: 46.7, n =14, other: 3.3), and 45-54 years old had the greatest number (n = 11). **Table 1** shows a demographic profile in detail**.**

Table 1

Distribution of survey respondents across faculties

Faculty	Participants (n)
Education	3
Engineering	2
Social Sciences	2
Computer Science	2
Economics	2
Law	2
Medicine	2
Business Administration	2
Humanities	2
International Relations	1
Environmental Sciences	1
Information Technologies	1
Public Administration	1
Tourism and Hospitality	1
Arts and Culture	1
Mathematics and Statistics	1
Architecture and Design	1
Sports Sciences	1
Agriculture	1
Foreign Languages	1
Total	30

Note: Faculties reflect typical divisions in major Azerbaijani universities (e.g., Baku State University, ADA University, Azerbaijan State Pedagogical University).

Flow diagram illustrating the one-phase quantitative pilot study design, including participant recruitment, online survey data collection (30 valid responses), and statistical analysis procedures (**Figure 2**).

Figure 2

Quantitative pilot study design and data analysis workflow

Ethical considerations

The Nakhchivan State University Institutional Review Board (NSU-IRB-341) approved the study, and it was performed in compliance with the Declaration of Helsinki. Informed permission was provided online through a single-step procedure: the informed consent participants were presented with a consent page in which the purpose of the study, voluntary participation, confidentiality, right to withdraw, and minimal risks and benefits were described. Movement on to the questionnaire meant consent.

RESULTS

This study employed a pilot dataset to examine educators' perceptions and practices related to generative AI. The data consisted of descriptive statistics, the distribution of demographics, patterns of correlation, inferential statistics, and multivariate models. Since the study is exploratory, the findings are provisional and meant to give birth to assumptions to be studied. The results are systematized by the research objectives, as they are synthesized in Table 2.

Participant characteristics

The sample used in the study consisted of 30 educators working in various faculties, with the most represented being the field of Education (**Figure 3**). The majority of the respondents were tenured (n = 22) and had more than 10 years of experience in higher education. There was gender representation of both male and female, with a few belongings to other. The greatest number was 45-54 years (**Figure 8**).

The descriptive analysis demonstrated that a bit more than half of the respondents was already familiar with the AI tools. The scores of AI literacy were between 1.7 and 4.9, with a mean of 3.42, which reflected moderate familiarity. Generative AI was rated between 1.6 and 4.9 (mean = 3.36) with a possible indication of moderate pedagogical usefulness. The perceived risk scores were between 1.3 and 3.7 (mean = 2.23), indicating a low-to-moderate perception of risk. The willingness to use AI tools was between 1.5 and 5, with the mean of 3.21 depicting moderate willingness. The willingness to change assessment practices had a higher mean (3.63), which indicates the readiness to include AI in evaluation strategies. The variation in the institutional support seemed the most (range=1-5, mean =3.04), which highlights the inconsistency of the perceived organizational readiness.

Demographic Distribution in Faculties

Table 3 includes a more specific demographic breakdown of the faculty in terms of tenure, employment, and gender, as well as age. The sample consisted of teachers with Agriculture, Arts, Business, Computer Science,

Education, Engineering, Economics, Humanities, Law, Medicine, International Relations, and other subjects (**Figure 3**) to cover both STEM and non-STEM disciplines.

The distribution of tenure was moderate, with the tenured faculty distribution even across Arts, Mathematics, Engineering, and Social Sciences. Representation was also higher in Business, Education, Foreign Languages, Environmental Sciences, Medicine, and Public Administration under non-tenured representation. Gender imbalances were noted: humanities, education, and law were mostly taught by female educators, and Sports and Engineering by male educators. Age distributions were similar to those in the faculty, with the 45-54 age group being the most common, younger participants (<35) being more common in the fields of Computer Science, Foreign Languages, Mathematics, and Sports, whereas those older (≥55) majoring more in Medicine and Public Administration. This heterogeneity of the population promotes the generalizability of AI-related attitudes in academic areas and career levels.

Patterns of correlation between AI Variables

There were a number of significant associations identified in the correlation analysis (**Table 4**). Perceived usefulness ($r = 0.759$) and willingness to adopt AI tools ($r = 0.788$) had a high correlation with AI literacy, which means that more AI-literate educators were willing to implement AI (Figure 5). Willingness to adopt also had a strong correlation with perceived usefulness ($r = 0.797$).

Perceived risk had moderate negative relationships with AI literacy ($r = -0.400$), perceived usefulness ($r = -0.591$), and willingness to adopt ($r = -0.509$), indicating that risk perceptions had negative correlations with familiarity, perceived utility, and willingness to adopt. The intentions to change assessment practices had weak positive relationships with AI literacy ($r = 0.220$), perceived usefulness ($r = 0.387$), and willingness to adopt ($r = 0.360$). Institutional support was found to have small positive correlations with literacy ($r = 0.293$), usefulness ($r = 0.246$), and willingness ($r = 0.139$). None of the correlations were above multicollinearity levels, and it was possible to proceed to regression and multivariate analyses.

Predispositions to AI between faculty and wise

The one-way ANOVA was performed to evaluate the difference in AI perceptions between the different faculties in terms of AI literacy, perceived usefulness, and willingness to adopt (Table 5, Figure 6). No statistically significant difference was found AI literacy ($F = 0.810$, $p = 0.668$), perceived usefulness ($F = 0.828$, $p = 0.654$), and willingness to adopt ($F = 0.515$, $p = 0.898$). These results indicate that the views toward generative AI are generally similar regardless of the field of study, whether STEM, social sciences, or humanities. Considering that the small sample sizes were used per faculty, these trends ought to be confirmed in larger research.

Antecedents of willingness to adopt generative AI

The predictors of the willingness to use AI tools were studied using linear regression analysis (**Table 6**, **Figure 7**). The most positive predictor was AI literacy ($\beta = 0.734$, $t = 5.770$), which meant that more literate educators were more willing to use AI. Perceived risk was significantly weakly negative ($\beta = 0.325$, $t = -1.943$), implying that fear of AI decreased willingness. Minimal predictive value was exhibited by institutional support ($\beta = -0.096$, $t = -0.961$). The regression constant (1.710) showed mediocre baseline willingness in the absence of the effects of predictors. These results suggest that personal abilities are more important than institutional aspects that determine the willingness to adopt AI.

Sex and Readiness to Adopt AI

Chi-square test contrasted the gender and the propensity to use generative AI (**Table 7**, **Figure 4**). The test gave $\chi^2 = 31.821$, $p = .668$, which is not significant. There was an equal distribution of male and female educators in the level of adoption, and the other category followed the same trend. These findings indicate that the gender factor is not a major factor in the attitudes to AI adoption in this sample.

This pilot research can give an initial understanding of the attitude and preparedness of teachers to generative AI in the tertiary education sector. The participants had moderate AI literacy, perceived usefulness, and willingness to adopt AI, and low-to-moderate perceived risk. Correlation and regression results suggest that individual literacy and risk perception are the primary determinants of adoption preparedness, but the institutional support does not affect this. Faculty-based analyses indicate uniformity in attitude between disciplines, and gender does not seem to affect adoption patterns. Such preliminary results can be used as a backbone to conduct more comprehensive research in the future to confirm and elaborate on the trends.

Table 2

Summary of descriptive statistics for educator responses

Variable	N	Categories	Most Frequent	Frequency	Mean	SD	Min	25th %	Median	75th %	Max
Faculty	30	20	Education	3	–	–	–	–	–	–	–
Tenure	30	2	Tenured	22	–	–	–	–	–	–	–
Years Employed	30	4	>10	21	–	–	–	–	–	–	–
Gender	30	3	Female	15	–	–	–	–	–	–	–
Age Group	30	4	45–54	11	–	–	–	–	–	–	–
Prior AI Use	30	–	–	–	0.533	0.507	0	0	1	1	1
AI Literacy	30	–	–	–	3.423	0.931	1.7	2.725	3.25	4.35	4.9
Perceived Usefulness	30	–	–	–	3.363	0.848	1.6	2.9	3.4	3.875	4.9
Perceived Risk	30	–	–	–	2.227	0.685	1.3	1.6	2.25	2.7	3.7
Willingness to Adopt	30	–	–	–	3.207	0.942	1.5	2.5	3.2	3.95	5
Assessment Change Intention	30	–	–	–	3.630	0.802	2.1	3.125	3.55	4.2	5
Institutional Support	30	–	–	–	3.040	1.100	1	2.125	2.9	3.85	5

Table 3

Demographics of participants by faculty, tenure, employment, gender, and age group

Faculty	Tenure	Years Employed	Gender	Age Group	Count
Agriculture	Tenured	5–10	Male	35–44	1
Architecture	Non-tenured	>10	Other	<35	1
Arts	Tenured	>10	Male	35–44	1
Business	Non-tenured	>10	Female	45–54	1
Business	Tenured	5–10	Male	35–44	1
Computer Science	Tenured	5–10	Female	<35	1
Computer Science	Tenured	>10	Male	35–44	1
Economics	Tenured	>10	Female	<35	1
Economics	Tenured	>10	Male	45–54	1
Education	Non-tenured	>10	Male	45–54	1
Education	Tenured	<1	Male	35–44	1
Education	Tenured	>10	Female	45–54	1
Engineering	Tenured	1–4	Male	45–54	1
Engineering	Tenured	>10	Male	35–44	1
Environmental Sciences	Non-tenured	>10	Female	45–54	1
Foreign Languages	Non-tenured	>10	Male	<35	1
Humanities	Tenured	<1	Female	45–54	1
Humanities	Tenured	>10	Female	35–44	1
Information Technologies	Tenured	>10	Female	45–54	1
International Relations	Tenured	>10	Female	35–44	1
Law	Tenured	1–4	Female	45–54	1
Law	Tenured	>10	Female	45–54	1
Mathematics	Tenured	5–10	Female	<35	1
Medicine	Non-tenured	>10	Male	≥55	1
Medicine	Tenured	>10	Female	45–54	1
Public Administration	Non-tenured	>10	Female	≥55	1
Social Sciences	Non-tenured	>10	Female	35–44	1
Social Sciences	Tenured	>10	Male	35–44	1
Sports	Tenured	>10	Male	<35	1
Tourism	Tenured	1–4	Male	35–44	1

Table 4

Correlation matrix of AI-related variables

Variable	AI Literacy	Perceived Usefulness	Perceived Risk	Willingness to Adopt	Assessment Change Intent	Institutional Support
AI Literacy	1	0.759	-0.400	0.788	0.220	0.293
Perceived Usefulness	0.759	1	-0.591	0.797	0.387	0.246
Perceived Risk	-0.400	-0.591	1	-0.509	-0.323	-0.162
Willingness to Adopt	0.788	0.797	-0.509	1	0.360	0.139
Assessment Change Intent	0.220	0.387	-0.323	0.360	1	-0.074
Institutional Support	0.293	0.246	-0.162	0.139	-0.074	1

Table 5

ANOVA results: Differences across faculties

Variable	F-value	p-value
AI Literacy	0.810	0.668
Perceived Usefulness	0.828	0.654
Willingness to Adopt	0.515	0.898

Table 6

Linear regression predicting willingness to adopt AI

Predictor	Coefficient (β)	Std. Error	t-value	p-value
Constant	1.710	0.706	2.422	–
AI Literacy	0.734	0.127	5.770	–
Perceived Risk	-0.325	0.167	-1.943	–
Institutional Support	-0.096	0.100	-0.961	–

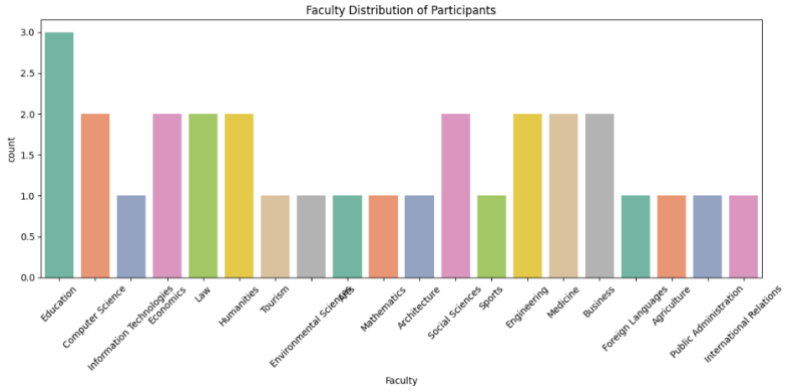
Table 7

Chi-Square analysis: Gender and willingness to adopt AI

Gender	1.5	1.9	2	2.2	2.3	2.5	2.6	2.8	3	3.1	3.3	3.4	3.5	3.8	4	4.4	4.5	4.9	5	χ^2	p
Female	0	0	2	1	0	1	0	1	0	0	1	1	2	0	2	1	1	1	1	31.821	0.668
Male	1	2	0	0	1	1	1	0	3	1	0	0	0	3	1	0	0	0	0	31.821	0.668
Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	31.821	0.668

Figure 3

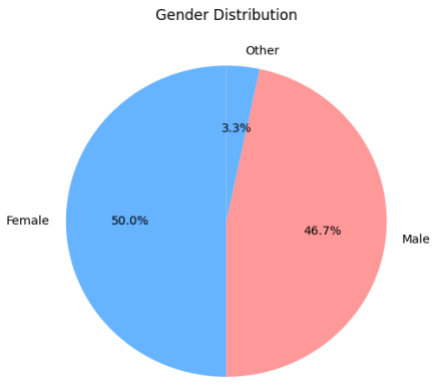
Number of participants in academic faculty



A bar chart shows the frequency distribution of the N=30. Education had the highest ratio, which guarantees a wide sample comprising STEM and non-STEM subjects (**Figure 3**).

Figure 4

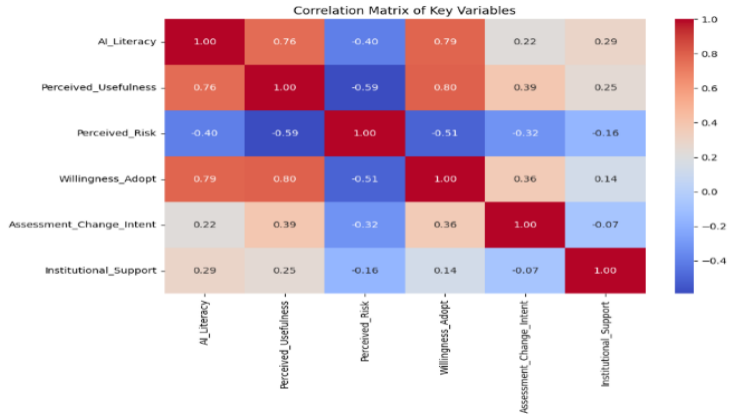
Distribution of willingness to adopt AI by gender



Stacked bar chart displaying the distribution of the different Willingness to Adopt scores of the three gender categories (Female, Male, Other). The Chi-square test showed that there was no exploratory trend difference between gender and the desire to adopt generative AI (chi 2 = 31.821, p = 0.668) (**Figure 4**).

Figure 5

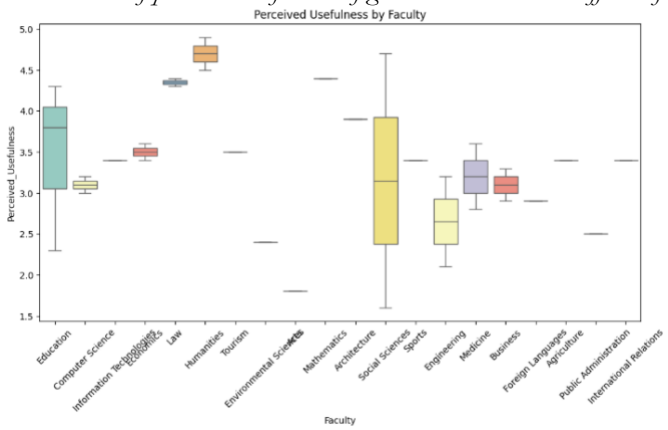
Pearson correlation coefficients among the key AI perception and readiness variables



Heatmap showing the Pearson correlation coefficients (r) among variables of AI. There are positive relationships between AI Literacy and Perceived Usefulness (e.g., r = 0.759 between Literacy and Usefulness) as well as between Willingness to Adopt and AI Literacy (e.g., r = 0.797 between Usefulness and Adoption). Perceived Risk has moderate negative correlations with all positive factors of adoption (**Figure 5**).

Figure 6

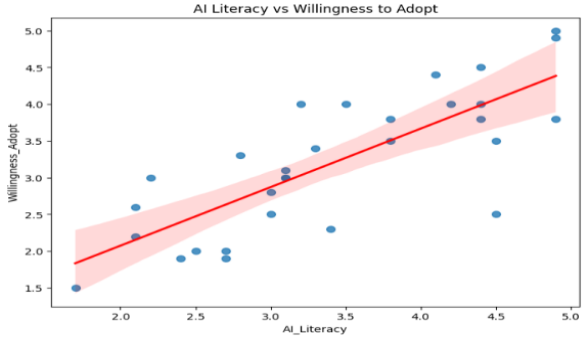
Distribution of perceived usefulness of generative AI across different faculties



Box plot of the distribution of perceived usefulness scores of generative AI across the different faculties (different faculties represented in the study) represented by the scores. The analysis (ANOVA) revealed that there was no exploratory trend difference in perceived usefulness between different faculties (F = 0.828, p = 0.654), and thus the attitudes of academic disciplines were homogenous (**Figure 6**).

Figure 7

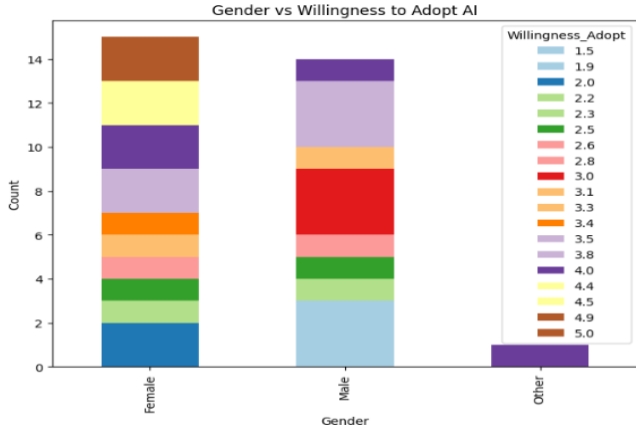
Relationship between AI literacy and educators' willingness to adopt generative AI tools



Scatterplot of the relationship between educators ' self-reported AI Literacy scores and their Willingness to adopt generative AI tools in instructional practice. The straight line is a linear regression fit, and the shaded area is the 95 percent interval. The regression analysis, along with a strong positive correlation (r = 0.788), demonstrates that AI literacy is the best preliminary association of readiness to adopt (**Figure 7**).

Figure 8

Distribution of participants by gender



Pie chart that shows the ratio of the genders of the N=30 respondents. There were also a similar representation of Female and Male teachers (50.0 percent and 46.7 percent, respectively) and a minor group of Other (3.3 percent) (**Figure 8**).

DISCUSSION

The results of this pilot study can be used to provide some initial information on the perceptions of faculty in Azerbaijan's higher education toward and their plans to use AI tools, specifically, AI literacy, perceived usefulness, perceived risk, institutional support, and intention to adopt. Table 2 showed that the sample was diverse in terms of discipline and demographics, which is why a broader picture of the adoption of AI was obtained (Taylor, 2022). The overall means of AI literacy and perceived usefulness indicate that teachers are aware of the possible advantages of AI, but they are not yet well-confident and knowledgeable (Ali et al., 2025). The level of perceived risk was not high, which shows that the educators did not see AI as a significant threat to pedagogy and student achievement. The desire to adopt was also in the medium-to-high range; however, the role of personal motivation and previous exposure is characterized by significant individual variation (Sat, 2025). The ratings of institutional assistance were relatively lower, which implies that the system of structural frameworks is not fully developed or clearly understood (Najafov, 2025).

As per the Technology Acceptance Model (TAM), which suggests that perceived usefulness is one of the key antecedents of behavioural intention, correlation analysis (**Table 3**) confirmed the presence of strong relationships between AI literacy and perceived usefulness. Teachers who were more AI literate identified the benefits of AI tools more easily in the real world (Yao & Wang, 2024). Fairly weak negative correlation between perceived risk and willingness to adopt indicates that the issues related to reliability, ethics, and equity may undermine the adoption even among motivated faculty (Wu et al., 2022). The positive relationships with literacy and usefulness were also modest in the case of institutional support, suggesting that a supportive environment fosters the development of confidence and does not yet necessarily reflect in adoption behaviour (Ullah et al., 2021). Institutional conditions, clear policies, training, and infrastructure, in the UTAUT perspective, are facilitating factors that, in the right development, can significantly influence the faculty behaviour.

The results of ANOVA demonstrated no data difference between disciplines, indicating that disciplinary background does not play a significant role in AI preparedness (Ma & Lei, 2024). This is contrary to the previous studies that showed more technology preparedness in STEM. A lack of disciplinary gaps could demonstrate the standardised exposure to digital tools or a regular practice of professional development throughout the institution (Kotsis, 2025).

The regression analysis (**Table 5**) established that individual AI competence was the most significant indicator of willingness to adopt, and the importance of personal capability in the adoption process at an initial stage was confirmed (Du, 2025). Perceived risk had a minor negative impact, which is in line with the literature of caution in relation to ethical and reliability issues (Adikoeswanto et al., 2022). It is worth noting that the institutional support was not found to be a major predictor. This might indicate the initial phase of AI policy implementation in Azerbaijani institutions, dependence of the faculty on individual self-efficacy rather than on institutional support, or constraints on the way the construct was assessed (Bahadir et al., 2024; Anthony et al., 2023).

Chi-square (**Table 6**) showed no gender difference in their willingness to adopt, which is consistent with recent studies that discovered that the availability of equal access to digital tools in the academic setting decreased the gender-based difference in technology adoption (Neway & Zegeye, 2022; Aruleba et al., 2022).

Together, these results support the idea that cognitive aspects, namely, knowledge and perceived usefulness, are the main factors of AI readiness, not demographic or disciplinary factors (Abulail et al., 2025). This focus on individual cognition and behavioral intention is supported both by TAM and UTAUT.

Limitations

There are a number of constraints that should be mentioned. In small studies, generalisation and statistical power are limited by the small sample size (n = 30), as is customary in pilot studies (Johanson and Brooks, 2010). Convenience sampling could have oversampled AI-interested faculty, leading to selection bias. Self-reporting measures have the risk of a social desirability effect that distorts real attitudes (Carian, E. K., & Hill, J. D. (2021). This cross-sectional design only provides a capture of the perceptions at one point, which is especially restrictive due to the speed at which AI tools and policies are changing (Shishakly, 2025). Also, the multiple linear regression model working on this sample size with three predictors increases the issue of overfitting; the results can be taken as exploratory relationships and not as predictive estimates, until additional, larger sample replication can be done.

Implications for practice

The practical implications of these findings are obvious. The development of AI literacy should be the most significant area of faculty development programs because it is the strongest predictor of adoption. The perceived usefulness and preparedness could be reinforced by emphasizing tangible pedagogical advantages of AI. Structural support, articulate policies, and these should be actively discussed in institutions as features that will become more important as adoption becomes more widespread. Strategic communication of risk perception can help to develop trust and decrease the uncertainty regarding AI-based teaching.

CONCLUSION

This pilot study examines the concepts of AI literacy, perceived usefulness, and readiness to apply AI-aided assessment among university educators in Azerbaijan, showing moderate scores in all three areas and a rather low perceived risk. The findings reveal positive relationships between AI literacy, perceived usefulness, and adoption willingness, with higher levels of AI familiarity prompting higher levels of adoption willingness; however, perceived risk was negatively correlated. Regression analysis provided initial evidence of patterns of adoption behavior; however, no significant differences among the faculty were observed. An improved variable was institutional support. This study, as a pilot, provides the background on new large-scale research work to confirm the emerging trends and implement responsible AI integration into higher education.

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Ethical statement

It was informed of the consent of the participants before their involvement. They were thoroughly informed about the purpose of the study, the voluntary nature of the study, the ability to withdraw at any time without any consequences, and the actions that were taken to preserve confidentiality and anonymity.

Competing interests

The authors declare that they do not have any conflicts of interest regarding this work.

Author contributions

Zulfiyya Ismayil and Alvan Jafarov conceptualized and designed the study; Geybulla Adil, Aysel Soltanova, and Kifayat Mansimova conducted data analysis; Aynur Alishanova, Sariyya Gundogdu, and Narmin Hasanova contributed to the literature review and drafting; Shafa Aliyev, Humeyir Ahmadov, and Ziyad Amrahov revised the manuscript; Alaviyya Nuri supervised the study and approved the final version. All authors reviewed and approved the final manuscript.

Zulfiyya Ismayil: Conceptualization, Methodology, Writing – Original Draft. Alvan Jafarov: Conceptualization, Methodology, Writing – Original Draft. Geybulla Adil: Formal Analysis, Data Curation. Aysel Soltanova: Formal Analysis, Data Curation. Kifayat Mansimova: Formal Analysis, Data Curation. Aynur Alishanova: Literature Review, Writing – Original Draft. Sariyya Gundogdu: Literature Review, Writing – Original Draft. Narmin Hasanova: Literature Review, Writing – Original Draft. Shafa Aliyev: Writing – Review & Editing. Humeyir Ahmadov: Writing – Review & Editing. Ziyad Amrahov: Writing – Review & Editing. Alaviyya Nuri: Supervision, Validation, Writing – Review & Editing. All authors have read and approved the final version of the manuscript.

Data availability

The datasets of the current study are available from the corresponding author on reasonable request.

AI disclosure

No artificial intelligence was employed when making this manuscript.

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REFERENCES

Abulail, R. N., Badran, O. N., Shkoukani, M. A., & Omeish, F. (2025). Exploring the factors influencing AI adoption intentions in higher education: An integrated model of DOI, TOE, and TAM. *Computers, 14*(6), 230. https://doi.org/10.3390/computers14060230

Acar, E., Deiri, Y., & Yigit, F. (2025). A focused review of artificial intelligence in education: Evolution and challenges. *Journal of Interdisciplinary Research in Artificial Intelligence and Society, 1*(1), Article 3. https://doi.org/10.20897/jirais/17640

Adamakis, M., & Rachiotis, T. (2025). Artificial intelligence in higher education: A state-of-the-art overview of pedagogical integrity, artificial intelligence literacy, and policy integration. *Encyclopedia, 5*(4), 180. https://doi.org/10.3390/encyclopedia5040180

Adeleye, O. O., Eden, C. A., & Adeniyi, I. S. (2024). Innovative teaching methodologies in the era of artificial intelligence: A review of inclusive educational practices. *World Journal of Advanced Engineering Technology and Sciences, 11*(2), 69–79. https://doi.org/10.30574/wjaets.2024.11.2.0091

Adikoeswanto, D., Eliyana, A., Syamsudin, N., Budiyanto, S., Arief, Z., & Anwar, A. (2022). The mediation role of adoption readiness on perceived anxiety and attitude toward using database management system at correctional institutions. *Heliyon, 8*(8), e10027. https://doi.org/10.1016/j.heliyon.2022.e10027

Ahmed, H. (2024). Institutional integration of artificial intelligence in higher education: The moderation effect of ethical consideration. *International Journal of Educational Reform*. https://doi.org/10.1177/10567879241247551

Aithal, P. S., & Maiya, A. K. (2023). Innovations in higher education industry–Shaping the future. *International Journal of Case Studies in Business, IT, and Education (IJCSBE), 7*(4), 283–311. https://doi.org/10.47992/ijcsbe.2581.6942.0321

Alam, A. (2022). Employing adaptive learning and intelligent tutoring robots for virtual classrooms and smart campuses: Reforming education in the age of artificial intelligence. *In Advanced computing and intelligent technologies: Proceedings of ICACIT 2022* (pp. 395–406). https://doi.org/10.1007/978-981-19-2980-9_32

Al-Amri, N. A., & Al-Abdullatif, A. M. (2024). Drivers of chatbot adoption among K–12 teachers in Saudi Arabia. *Education Sciences, 14*(9), 1034. https://doi.org/10.3390/educsci14091034

Ali, F., Ahmed, A., Alipour, M. A., & Terashima-Marin, H. (2025). Adoption of AI-coding assistants in programming education: Exploring trust and learning motivation through an extended technology acceptance model. *Journal of Computers in Education*, 1–39. https://doi.org/10.1007/s40692-025-00375-w

Aliyev, M., & Aliyeva, S. (2024). Revisiting digital transformation of Azerbaijan higher education in the new digital era. *Yildiz Social Science Review, 10*(1), 72–83. https://doi.org/10.51803/yssr.1441943

Alsharefeen, R., & Al Sayari, N. (2025, June). Examining academic integrity policy and practice in the era of AI: A case study of faculty perspectives. *In Frontiers in Education,* 10, 1621743. https://doi.org/10.3389/feduc.2025.1621743

Alwaqdani, M. (2025). Investigating teachers' perceptions of artificial intelligence tools in education: Potential and difficulties. *Education and Information Technologies, 30*(3), 2737–2755. https://doi.org/10.1007/s10639-024-12903-9

Anthony Jr, B., Kamaludin, A., & Romli, A. (2023). Predicting academic staff's behavior intention and actual use of blended learning in higher education: Model development and validation. *Technology, Knowledge and Learning, 28*(3), 1223–1269. https://doi.org/10.1007/s10758-021-09579-2

Arinushkina, A. A. (Ed.). (2024). *Integration strategies of generative AI in higher education*. IGI Global. https://doi.org/10.4018/979-8-3693-5518-3

Arkoumanis, G., Sofos, A., Ventista, O. M., Ventistas, G., & Tsani, P. (2025). The impact of artificial intelligence on elementary school students' learning: A meta-analysis. *Computers in the Schools*, 1–22. https://doi.org/10.1080/07380569.2025.2520787

Aruleba, K., Jere, N., & Matarirano, O. (2022). An evaluation of technology adoption during remote teaching and learning at tertiary institution by gender. *IEEE Transactions on Computational Social Systems, 10*(3), 1335–1346. https://doi.org/10.1109/tcss.2022.3163912

Asadov, K., & Najafov, R. (2026). Correction and development of speech in children with hearing impairments: Psychological, linguistic, and pedagogical approaches. *Science, Education and Innovations in the Context of Modern Problems*, *9*(1), 65–82. https://doi.org/10.56334/sei/9.1.5

Bahadır, F., Yeşiltaş, M., Sesen, H., & Olaleye, B. R. (2024). The relation between perceived organizational support and employee satisfaction: The role of relational psychological contract and reciprocity ideology. *Kybernetes, 53*(1), 102–122. https://doi.org/10.1108/k-04-2022-0520

Balaskas, S., Tsiantos, V., Chatzifotiou, S., & Rigou, M. (2025). Determinants of ChatGPT adoption intention in higher education: Expanding on TAM with the mediating roles of trust and risk. *Information, 16*(2), 82. https://doi.org/10.3390/info16020082

Bjerg, J. (2024). *The early-career professional's guide to generative AI*. Apress. https://doi.org/10.1007/979-8-8688-0456-4

Blankendaal-Tran, K. N., Meulenbroeks, R. F., & van Joolingen, W. R. (2026). Teachers' and students' needs for supporting digital research skills in secondary STEM education. *European Journal of STEM Education, 11*(1). https://doi.org/10.20897/ejsteme/17755

Bouzaher, S. (2025). Concept of electronic consumer protection and means of safeguarding it amid artificial intelligence applications. *Science, Education and Innovations in the Context of Modern Problems, 8*(11), 501–510. https://doi.org/10.56352/sei/8.11.38

Carian, E. K., & Hill, J. D. (2021). Using frameworks of social desirability to teach subjectivity in interviews. *Teaching Sociology, 49*(4), 381–393. https://doi.org/10.1177/0092055x211017195

Chaimongkol, T., & Rattanakantadilok, G. (2026). Female representation in the Thai boys' love industry: The intersection of privilege and oppression. *Feminist Encounters: A Journal of Critical Studies in Culture and Politics, 10*(1), Article 31. https://doi.org/10.20897/femenc/18174

Denisova-Schmidt, E. (2017). *The challenges of academic integrity in higher education: Current trends and prospects*.

Du, Y. (2025). How teachers' digital literacy influences the intention to use AI teaching tools: An empirical study based on an integrated model. *Interactive Learning Environments,* 1–23. https://doi.org/10.1080/10494820.2025.2538746

Gjini, T. W., & Hernandez-Gantes, V. M. (2025). Who Gets to Intern? Demographic and Institutional Predictors of Internship Participation Among International Students. *European Journal of Education & Language Review, 1*(1), Article 1. https://doi.org/10.20897/ejelr/17312

Hajiyeva, N. A., Huseynov, R. T., Huseynova, M. R., Mammadova, A. V., & Mammadov, S. J. (2023). Digitalization of education in Azerbaijan. *AGORA International Journal of Economical Sciences, 17*(2), 130–136. https://doi.org/10.15837/aijes.v17i2.6450

Haroud, S., & Saqri, N. (2025). Generative AI in higher education: Teachers' and students' perspectives on support, replacement, and digital literacy. *Education Sciences, 15*(4), 396. https://doi.org/10.3390/educsci15040396

Hewavitharana, T., Nanayakkara, S., Perera, A., & Perera, P. (2021, November). Modifying the unified theory of acceptance and use of technology (UTAUT) model for the digital transformation of the construction industry from the user perspective. *Informatics, 8*(4), 81. https://doi.org/10.3390/informatics8040081

Hien, N. T. T. (2022). Digital economic development in Ho Chi Minh City in the current period. *Bank and Policy, 2*(1).

Jamalova, M. (2025). Adapting to artificial intelligence-related specializations in higher education: Evidence from Azerbaijan. In 2024 *Yearbook Emerging Technologies in Learning* (pp. 45–69). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-80388-8_3

Jin, Y., Yan, L., Echeverria, V., Gašević, D., & Martinez-Maldonado, R. (2025). Generative AI in higher education: A global perspective of institutional adoption policies and guidelines. *Computers and Education: Artificial Intelligence, 8,* 100348. https://doi.org/10.1016/j.caeai.2024.100348

Katz, N. (2026). Digital inequality in context: A socio-technical analysis of Arab students' remote learning in Israel. *Asia Pacific Journal of Education and Society, 14*(1), Article 6. https://doi.org/10.20897/apjes/17975

Kheira, B., & Amina, K. (2025). Applications of artificial intelligence in enhancing the efficiency and innovation of scientific research in higher education institutions. *Science, Education and Innovations in the Context of Modern Problems, 8*(10), 1047–1054. https://doi.org/10.56334/sei/8.10.91

Kooli, C. (2023). Chatbots in education and research: A critical examination of ethical implications and solutions. *Sustainability, 15*(7), 5614. https://doi.org/10.3390/su15075614

Kotsis, K. T. (2025). From chalkboard to chatbot: The future of physics education through artificial intelligence integration. *EIKI Journal of Effective Teaching Methods, 3*(2). https://doi.org/10.59652/jetm.v3i2.515

Kuzmenko, A. (2024). The modern teacher as a subject in the process of forming future PhDs culture of academic integrity: Tempora mutantur, et nos mutamur in illis. *Scientific Journal of Polonia University, 63*(2). https://doi.org/10.23856/6304

Lampropoulos, G., & Papadakis, S. (2025). The educational value of artificial intelligence and social robots. In G. Lampropoulos & S. Papadakis (Eds.), *Social robots in education: How to effectively introduce social robots into classrooms* (pp. 3–15). Springer. https://doi.org/10.1007/978-3-031-82915-4_1

Lang, Q., Wang, M., Yin, M., Liang, S., & Song, W. (2025). Transforming education with generative AI (GAI): Key insights and future prospects. *IEEE Transactions on Learning Technologies*. https://doi.org/10.1109/tlt.2025.3537618

Larguet, S. (2025). Legal consultation in the era of artificial intelligence: Challenges of civil liability, ethical accountability, and the redefinition of professional practice in the digital age. *Science, Education and Innovations in the Context of Modern Problems, 8*(11), 907–915. https://doi.org/10.56352/sei/8.11.71

Li, J. (2024). Research on the modernization trends in higher education development. *International Journal of Educational Teaching and Research, 1*(4). https://doi.org/10.70767/ijetr.v1i4.492

Ma, S., & Lei, L. (2024). The factors influencing teacher education students' willingness to adopt artificial intelligence technology for information-based teaching. *Asia Pacific Journal of Education, 44*(1), 94–111. https://doi.org/10.1080/02188791.2024.2305155

Mateusz, M., Jakub, M., Anna, Ż., Ameen, N., & Tomasz, T. (2025). Artificial intelligence in medical education: A narrative review. *AI, 6*(12), 322. https://doi.org/10.3390/ai6120322

Mehdaoui, A. (2024). Unveiling barriers and challenges of AI technology integration in education: Assessing teachers' perceptions, readiness and anticipated resistance. *Futurity Education, 4*(4), 95–108. https://doi.org/10.57125/fed.2024.12.25.06

Mohamed, H. R. K. R. (2026). Demystifying artificial intelligence: Comprehensive guide for non-native speakers. *In AI's role in language learning and communication* (pp. 1–26). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3373-5681-5.ch001

Mohammed, R. R. (2025). Generative AI in the academy: Analysis of stakeholders' experiences in US higher education organizations (Doctoral dissertation, Arizona State University). https://doi.org/10.29242/casestudy.maparizonastate2025

Mouta, A., Torrecilla-Sánchez, E. M., & Pinto-Llorente, A. M. (2025). Comprehensive professional learning for teacher agency in addressing ethical challenges of AIED: Insights from educational design research. *Education and Information Technologies, 30*(3), 3343–3387. https://doi.org/10.1007/s10639-024-12946-y

Najafov, R. (2025). On the sociology of education, management and analysis of the principles of orientation of education in the aspect of socialization of the individual. *Science, Education and Innovations in the Context of Modern Problems, 8*(7), 15–34. https://doi.org/10.56352/sei/8.8.2

Nazim, M., & Alzubi, A. A. F. (2025). Empowering EFL teachers' perceptions of generative AI-mediated self-professionalism. *PLoS One, 20*(6), e0326735. https://doi.org/10.1371/journal.pone.0326735

Neway, M. M., & Zegeye, M. B. (2022). Gender differences in the adoption of agricultural technology in North Shewa Zone, Amhara Regional State, Ethiopia. *Cogent Social Sciences, 8*(1), 2069209. https://doi.org/10.1080/23311886.2022.2069209

Nuri, A., Ismayil, Z., Babayeva, M., Guliyev, A., Rzayeva, F., Shiraliyeva, G., & Jahangirli, T. (2025). Artistic expressions as vehicles of cultural memory. *Journal of Ethnic and Cultural Studies, 12*(5), 258–275.

O'dea, X., & O'Dea, M. (2023). Is artificial intelligence really the next big thing in learning and teaching in higher education? A conceptual paper. *Journal of University Teaching and Learning Practice, 20*(5), 1–17. https://doi.org/10.53761/1.20.5.06

Omar, K. (2025). Artificial intelligence and legislative quality: Enhancing legal drafting, simplifying legal language, and addressing ethical and accountability challenges. *Science, Education and Innovations in the Context of Modern Problems, 8*(11), 237–251. https://doi.org/10.56352/sei/8.11.16

Pandey, J. K. (2024). Unlocking the power and future potential of generative AI in government transformation. *Transforming Government: People, Process and Policy*. https://doi.org/10.1108/tg-01-2024-0006

Papadakis, S. (2025). Teaching with artificial intelligence. In G. Lampropoulos & S. Papadakis (Eds.), *Social robots in education: How to effectively introduce social robots into classrooms* (pp. 119–134). Springer. https://doi.org/10.1007/978-3-031-82915-4_8

Pyra, M. (2021). Summary of doctoral dissertation: Impact of state higher vocational schools on local development in the Lublin region. *Economic and Regional Studies, 12(3),* 343–352. https://doi.org/10.2478/ers-2019-0031

Rajagopal, S., Popat, K., Meva, D., & Bajeja, S. (Eds.). (2024). *Advancements in smart computing and information security: Second international conference, ASCIS 2023, Rajkot, India, December 7–9, 2023, revised selected papers, part III* (Vol. 2039). Springer Nature. https://doi.org/10.1007/978-3-031-59100-6

Raza, F. A., Singh, A. D., Kovilpillai, J. J. S., Hamdan, A., & Rajaratnam, V. (2025). Safeguarding integrity in AI-enhanced education: Stakeholder perspectives on accuracy, validity, and ethics in ASEAN. *European Journal of STEM Education*, *10*(1), 22. https://doi.org/10.20897/ejsteme/17307

Rejali, S., Aghabayk, K., Esmaeli, S., & Shiwakoti, N. (2023). Comparison of technology acceptance model, theory of planned behavior, and unified theory of acceptance and use of technology to assess a priori acceptance of fully automated vehicles. *Transportation Research Part A: Policy and Practice, 168,* 103565. https://doi.org/10.1016/j.tra.2022.103565

Rozputnia, B., Shevchenko, L., Umanets, V., Yashchuk, S., & Sabadosh, Y. (2025). Methodological approaches to using artificial intelligence to develop creative skills in future designers. In *Environment. Technology. Resources. Proceedings of the International Scientific and Practical Conference* (Vol. 2, pp. 293–298). https://doi.org/10.17770/etr2025vol2.8596

Şahin, Ç. (2024). An evolving energy partnership: The European Union and Azerbaijan. *Eurasian Research Journal, 6*(1), 25–49. https://doi.org/10.53277/2519-2442-2024.1-02

Sallam, M. (2023, March). ChatGPT utility in healthcare education, research, and practice: Systematic review on the promising perspectives and valid concerns. *Healthcare, 11*(6), 887. https://doi.org/10.3390/healthcare11222955

Sat, M. (2025). The impact of AI integration in project preparation in education course on pre-service teachers' innovativeness, AI anxiety, attitudes, and acceptance. *BMC Psychology, 13*(1), 1297. https://doi.org/10.1186/s40359-025-03647-3

Shakib Kotamjani, S., Shirinova, S., Muratova, K., & Sharma, M. (2024, December). Exploring students' perspectives on generative AI for academic purposes in Uzbekistan's higher education. In *Proceedings of the 8th International Conference on Future Networks & Distributed Systems* (pp. 986–994). https://doi.org/10.1145/3726122.3726266

Shishakly, R. (2025). Understanding AI in higher education: Gendered and intersectional students' experience with ChatGPT use. *European Journal of STEM Education, 10*(1), Article 36. https://doi.org/10.20897/ejsteme/17646

Taimur, A. (2024). Manipulative phantoms in the machine: A legal examination of large language model hallucinations on human opinion formation. In *IFIP International Summer School on Privacy and Identity Management* (pp. 59–77). Cham: Springer Nature Switzerland. https://doi.org/10.1007/978-3-031-91054-8_3

Tariq, M. U. (2024). AI-powered language translation for multilingual classrooms. In *Integrating generative AI in education to achieve sustainable development goals* (pp. 29–46). IGI Global Scientific Publishing. https://doi.org/10.4018/979-8-3693-2440-0.ch002

Taylor, P. M. (2022). Being a doctoral student: The dissertation stage. In *Research anthology on doctoral student professional development* (pp. 64–68). IGI Global. https://doi.org/10.4018/978-1-7998-2656-9.ch020

Thelma, C. C., Sain, Z. H., Shogbesan, Y. O., Phiri, E. V., & Akpan, W. M. (2024). Digital literacy in education: Preparing students for the future workforce. *International Journal of Research, 11*(8), 327–343. https://doi.org/10.33650/ijit.v3i1.9364

Tran, C., James, B., Allen, V., de Castro, R. O., & Sanin, C. (2025). Using generative artificial intelligence in learning and teaching: An empirical analysis on academic staff's perspectives. *Journal of Applied Learning and Teaching, 8(*1), 78–90. https://doi.org/10.37074/jalt.2025.8.1.23

Uğraş, H., Uğraş, M., Papadakis, S., & Kalogiannakis, M. (2024). Innovative early childhood STEM education with ChatGPT: Teacher perspectives. *Technology, Knowledge and Learning.* https://doi.org/10.1007/s10758-024-09788-6

Ullah, N., Mugahed Al-Rahmi, W., Alzahrani, A. I., Alfarraj, O., & Alblehai, F. M. (2021). Blockchain technology adoption in smart learning environments. *Sustainability, 13*(4), 1801. https://doi.org/10.3390/su13041801

Wu, W., Zhang, B., Li, S., & Liu, H. (2022). Exploring factors of the willingness to accept AI-assisted learning environments: An empirical investigation based on the UTAUT model and perceived risk theory. *Frontiers in Psychology, 13*, 870777. https://doi.org/10.3389/fpsyg.2022.870777

Yao, N., & Wang, Q. (2024). Factors influencing pre-service special education teachers' intention toward AI in education: Digital literacy, teacher self-efficacy, perceived ease of use, and perceived usefulness. *Heliyon, 10*(14). https://doi.org/10.1016/j.heliyon.2024.e34894

Yener, A. L., Christian, J. D., Chicheportiche, S. J., Rajasekaran, S., Ahmadov, P., & Castro, L. S. (2024). *Digitalization of human development services in Europe and Central Asia*. The World Bank Group, 42438. https://doi.org/10.1596/42438

Zacharis, G., & Papadakis, S. (2025). Can AI grade like a human? Validity, reliability, and fairness in university coursework assessment. *Educational Process: International Journal, 19,* e2025591. https://doi.org/10.22521/edupij.2025.19.591

