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Artificial Intelligence and Students' Perceptions of Emerging Jobs: The Role of AI Knowledge, Perceived Usefulness, Perceived Ease of Use, and Future Work Skills

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ABSTRACT

Artificial Intelligence (AI) continues to reshape the workplace landscape. It is imperative to understand how students perceive AI and its implications for future job creation. To examine this phenomenon, we used a cross-sectional design to capture students' perceptions of Artificial Intelligence (AI) and its implications for future job creation. A diverse group of students approached to conduct this survey of students studying different specialties in universities in Karachi city. The results revealed a generally positive correlation between students' perceptions of AI and their views on emerging jobs. The research contributes to the ongoing discourse on AI's impact on the workforce by providing empirical insights into students' attitudes towards AI and its role in job creation. It suggests that educational institutions, policymakers, and industry stakeholders should align education and training with the evolving demands of the AI-driven job market. Further research is encouraged to explore how students' perspectives change over time as technology continues to advance. Nevertheless, the study recognizes limitations, including potential sampling biases, a single-city survey, and not including some other relevant factors.

Keywords: Artificial Intelligence, Emerging Jobs, AI Jobs, AI Knowledge, Future Work Skills, Students' Perception, Perceived Ease of Use.

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INTRODUCTION

Since the early development of industrial innovation, technological advancement has created both optimism about productivity and concerns about employment displacement and changing skill requirements (Nubler, 2016). Technological change is constantly reshaping industries, production systems, and the nature of work, creating new occupations while displacing or redefining existing ones. As AI developments are taking a rapid pace, tensions have become an important paradigm of automation and intelligent digital technologies. AI performs cognitive, analytical, communicative, and decision-support functions, redefining the occupational structures and the skills required in future workplaces (Efri Ekaningrum *et al.*, 2023; Kim *et al.*, 2021). Unlike earlier technological transformations that primarily mechanized physical tasks, the contemporary diffusion of AI has generated a debate about its implications for employment. This issue is particularly important for students preparing to enter workplaces that may differ considerably from those experienced by previous generations. Although automation may substitute for routine and repetitive tasks, technological transformation can simultaneously generate new occupations and increase demand for workers capable of developing, managing, and complementing intelligent technologies. As AI becomes increasingly embedded in education, business, healthcare, and everyday activities, students encounter it not only as a learning technology but also as a potential determinant of their future career opportunities (Vincent-Lancrin & Van Der Vlies, 2020). The future labor market is therefore likely to involve substantial occupational restructuring rather than simply job displacement.

Students' understanding of and perceptions toward AI may consequently influence how they interpret emerging employment opportunities. AI knowledge can enable students to better understand the technology and its applications, while perceived usefulness and perceived ease of use may shape their engagement with AI and their readiness to develop technology-related competencies (Salim *et al.*, 2023). At the same time, perceptions of future work skills are increasingly important as AI automates routine activities and potentially increases the value of human capabilities such as critical thinking, creativity, problem-solving, communication, collaboration, and adaptability (Rozman *et al.*, 2023a). Kirsanov *et al.* (2026) reported less usage among students with greater ethical concerns.

A growing diffusion of AI, literacy, and educational applications requires more research on how students' AI-related perspectives collectively shape their expectations about emerging employment opportunities. Existing research has largely examined technology acceptance and intention to use AI, with comparatively less emphasis on students' perceptions of the jobs and skills likely to emerge from AI-driven transformation, especially in the emerging economy part of the world, like Pakistan. Examining this research gap is important because students' expectations about future employment may impact their educational choices, career aspirations, and preparedness for technological change.

Accordingly, this study investigates if students' AI knowledge, perceived usefulness of AI, perceived ease of use of AI, and perceptions of future work skills have any influence on their perceptions of emerging jobs. By building on AI-related perceptions with future-work considerations, the study establishes insights for educators and policymakers seeking to strengthen students' AI literacy, develop future-oriented competencies, and prepare them for an increasingly AI-enabled labor market.

REVIEW OF LITERATURE

The AI Paradigm

Artificial intelligence (AI) is radically changing our lives and the way we operate (Pillai, 2023). A lot of jobs will alter significantly as the labor market gets more digitalized. On the one hand, these modifications lead to a rise in the relative need for specific abilities that are incompatible with digital technology. The need for the abilities required to interact with digital technology is also rising. However, there's a good chance that jobs requiring abilities that these digital technologies may replace will soon become outdated (Fossen & Sorgner, 2019). Fundamental changes in industry, technology, and manufacturing techniques are the main drivers of growth and development. They possess the power to modify the character of work, establish new ones, and dismantle current ones, radically altering the workplace environment (Nubler, 2016). Simulated intelligence in training can speed up customized learning, provide persistent evaluation and criticism to understudies, and use learning assessment to separate the educational experience so it adjusts progressively to understudies' singular necessities. Man-made reasoning will play a vital role in customized learning, appearing in the capacity to adjust the educational plan's execution, the educational program, the substance of the educational plan, the speed of learning, and the requirements of every understudy (Rozman *et al.*, 2023a).

The rise of innovation might dispense with specific callings, leaving space for other more useful callings. Similarly, robotization will bring about more work creation than employment cutbacks (21% and 33% of the worldwide labor force, or 555 million and 890 million positions until 2030). As per Gartner (2017), "Man-made intelligence will make 2.3 million positions in 2020 while killing 1.8 million", an expected number that surpasses the quantity of positions that are wiped out by man-made intelligence in 2020. Chowdhry (2018) additionally upholds the possibility that "the development of man-made brainpower could make 58 million net new positions in the following couple of years" (Badet, 2021). More limited-scale changes because of artificial intelligence will likewise create new undertakings for laborers, which could require new abilities (Selenko *et al.*, 2022). According to some economists, this technological advancement will lead to the creation of new jobs because there is a growing need for qualified laborers who can maintain and run increasingly complex automation and artificial intelligence systems (Kim *et al.*, 2021).

Hypotheses Development

Students' Knowledge of AI (SKAI) and Students' Perception of Emerging Jobs (SPWS)

Artificial Intelligence is applied not only in robotics but also in automated inference engines, computer vision, knowledge representation, and natural language processing. (Chang & Lu, 2019). However, the AI's impact of students' creative thinking remains unclear (Balta-Salvador *et al.*, 2026). If students believe that technology is user-friendly and helpful for their education, they will use it (Davis, 1989). Early adolescence is a crucial period for young people to develop a STEM identity and begin considering potential career paths. Students are increasingly exposed to AI daily without even recognizing it (Dabney *et al.*, 2012). Although AI-powered websites like YouTube and TikTok provide entertainment and learning opportunities, their algorithms can potentially cause harm. Students must understand AI operations to responsibly use them. Increased AI literacy is crucial for inclusive development and addressing demographic disparities. Collaborating with underrepresented groups in computing can help establish the future AI industries. By participating in technology development, we can work towards a more inclusive and diverse future (Lee *et al.*, 2021).

H₁: The students' knowledge of AI has a positive impact on students' perception about future job emergence.

Students Perception of Usefulness of AI (SPUAI) and Students Perception of Emerging Jobs (SPWS)

It is estimated that in the coming times, about 65% of children entering primary school today will work in jobs that don't exist now (WEF cited in North 2019). More businesses are funding artificial intelligence (AI) than any other digital technology (McGrath 2019 cited in) because AI isn't just a new technology; it is the next general-purpose technology (GPT) (Trajtenberg, 2018). AI plays a role in facilitating the fourth industrial revolution. An instrument called the Technology Readiness Index was created based on the literature to gauge how prepared a person is to use technology (Parasuraman & Colby, 2015). These researchers defined readiness as a person's propensity to use technology as a way of achieving objectives (Sing *et al.*, 2022). Students' BI (Behavioral Intention) to learn AI is improved when they have an optimistic (OP) attitude regarding AI, as this reduces their worries and anxiety (Chai *et al.*, 2020). Optimism is a psychological quality that promotes optimistic expectations for future achievement (King & Caeon, 2021). One component of the Technology Readiness Index is optimism (Parasuraman & Colby, 2015) and is reported to be associated with perception (Sing *et al.*, 2022).

H₂: Students' perception of the usefulness of AI has a positive impact on students' perception about future job emergence.

Perceived Ease of Use of AI (PEUAI) and Students' Perception of Emerging Jobs (SPWS)

A person's intention to use technology is influenced by how easy they perceive it to be, and this intention in turn shapes their usage behavior. Stated differently, the present study aims to investigate students' perceptions of technology and its impact on their intention to use it, as well as their actual usage patterns. Studies on how students feel about technology inclusion in the classroom are not new, and many of them have produced encouraging findings (Toar *et al.*, 2022). According to Davis's technology adoption model, perceived utility and perceived ease of use demonstrate how various elements interact to influence how people utilize technology (Davis, 1989). In the context of this article, it is likely that students would embrace the AI app for their learning if they thought it was simple to use (Rozman *et al.*, 2023a). AI-powered tools enable students to learn anytime, anywhere, and without the need for a teacher. They minimize living and transportation costs, enhancing the educational experience. AI can create customized study programs based on students' knowledge gaps, enhancing efficiency. It also aids in assessing students' strengths and weaknesses by evaluating large datasets from various sources. This allows teachers to use the right tools to help students reach their full potential and monitor their development more accurately (Rozman *et al.*, 2023a).

H₃: Perceived ease of use of AI has a positive impact on students' perception about future job emergence

Students' Perception of Future Work Skills (SPWS) and Students' Perception of Emerging Jobs (SPWS)

Globally, nations are becoming more conscious of the possible social and economic advantages of creating and utilizing AI. A nation can be developed and transformed by an efficient education system. Artificial Intelligence has an impact on education, but it also appears to be limited to this field and follows the student even beyond graduation. For example, Wang and Siau (2017) claim that AI will influence the skill sets that employers will need in the future. It will take the place of a lot of other research that entails repetitive activities and easily automatable structures, as opposed to unstructured fields that need intricate cognitive intervention. (Wang & Siau, 2019). AI is expected to enhance instruction and assess student achievement, marking a new academic era where all students

have equal chances of success. Education aims to equip students with necessary skills for a rapidly changing world, and the effects of AI technology should be discussed to prepare students for future occupations (Rozman *et al.*, 2023b).

H4: Students' perception of future work skills has a positive impact on students' perception of future job emergence.

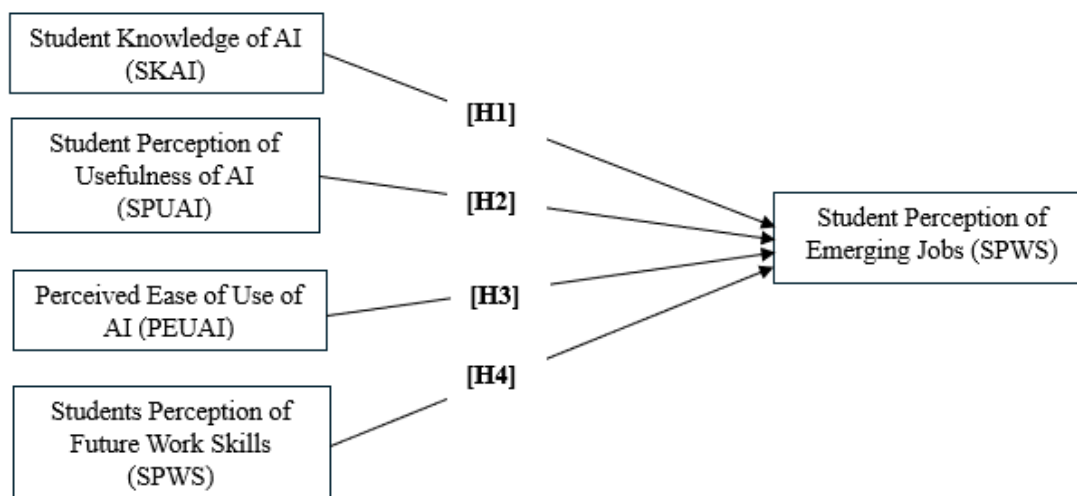


Figure 1

Research Framework

MATERIALS AND METHODS

This study used a deductive, cross-sectional, and quantitative research design to investigate the subject factors influencing students' perceptions of emerging jobs in the use of AI. Extant literature, mainly from the AI and management science domain, was the basis of the hypothesis and subsequent research framework.

Measures and Research Instrument

Data was collected using a structured questionnaire administered through both self-administered and online surveys distributed through Google Docs. The questionnaire initially comprised 37 items across five constructs: Students' Knowledge of AI (SKAI; 8 items), Students' Perceived Usefulness of AI (SPUIAI; 7 items), Perceived Ease of Use of AI (PEUAI; 6 items), Students' Perceptions of Future Work Skills (SPWS; 7 items), and Students' Perceptions of Emerging Jobs (SPEJ; 9 items). Responses were recorded on a five-point Likert scale ranging from 1 = strongly disagree to 5 = strongly agree.

Population, Sampling and Data Collection

Students at universities or Higher Education Institutes (HEIs) were the target population, whereas the sample comprised undergraduate and postgraduate students from diverse academic disciplines, including computer science, engineering, business, social sciences, and humanities, enrolled at universities in Karachi, Pakistan. The constructs of the study were adapted from Rozman *et al.* (2023), such that the items were converted to the study context of AI perception of future jobs in Pakistani markets. Data were collected from eligible undergraduate and postgraduate students across universities in Karachi, through non-probability convenience sampling. Participation was voluntary, and respondents were informed about the purpose of the study and the confidentiality of their

responses. A minimum sample size of 384 respondents was determined using the SurveyMonkey sample-size calculator, based on conventional assumptions of a 95% confidence level and 5% margin of error. After necessary refinements for possible errors, a total of 387 responses were qualified for the final analysis.

Pilot Testing and data analysis

The survey instrument was pilot tested by 34 respondents to assess items' internal consistency. The overall Cronbach's alpha was 0.935, indicating high internal reliability. Although the SPUAI scale showed comparatively lower reliability ($\alpha = 0.641$), the pilot results were used to refine the instrument before the main data collection. For the main study, the measurement and structural models were subsequently evaluated using Partial Least Squares Structural Equation Modelling (PLS-SEM). However, SPSS version 26 was employed to assess descriptive characteristics of data. Items demonstrating inadequate outer loadings were removed during measurement-model evaluation in accordance with established PLS-SEM criteria (Hair *et al.*, 2022).

RESULTS AND FINDINGS

Characteristics of Sample

Table 1

Characteristics of Sample (n = 387)

Category	Items	Frequency	Percentage
Gender	Male	193	49.9
	Female	194	50.1
Level of Education	Undergraduate	258	66.7
	Postgraduate	129	33.3
Classification of University	Private University	145	37.5
	Govt. University	242	62.5
Field of Study	Medical	78	20.2
	Engineering	77	19.9
	Business Studies	78	20.2
	IT / Computer Sciences	77	19.9
	Social Sciences	77	19.9
Total		387	100

Table 1 exhibits a breakdown across several categories of the 387 responses. Gender representation was almost equal, with males accounting for 49.9% (n = 193) and females 50.1% (n = 194). Most respondents were undergraduates (66.7%), while postgraduates represented 33.3%. Regarding university classification, 62.5% attended public-sector universities, compared with 37.5% enrolled in private institutions. Representation across five fields of study was relatively balanced, ranging from 19.9% to 20.2%. This distribution provides a diverse student sample for examining perceptions of emerging jobs and the roles of AI knowledge, perceived usefulness, perceived ease of use, and future work skills.

Assessment of Measurement Model

Table 2

Outer Loadings, Reliability and Convergent Validity

	Loadings	α	CR	AVE
PEUAI1	0.776	0.820	0.877	0.641
PEUAI2	0.813			
PEUAI3	0.837			
PEUAI4	0.775			
SKAI1	0.736	0.819	0.879	0.646
SKAI2	0.841			
SKAI3	0.863			
SKAI4	0.767			
SPEJ1	0.821	0.921	0.938	0.715
SPEJ2	0.825			
SPEJ3	0.875			
SPEJ4	0.878			
SPEJ5	0.849			
SPEJ6	0.825			
SPUAI1	0.786	0.641	0.805	0.580
SPUAI2	0.729			
SPUAI3	0.767			
SPWS1	0.863	0.810	0.887	0.724
SPWS2	0.858			
SPWS3	0.832			

* Cronbach Alpha (α) > 0.7, Composite Reliability (CR) > 0.7, Average Variance Extracted (AVE) > 0.5

The measurement model was analyzed using outer loadings of indicators, Cronbach's alpha (α), composite reliability (CR), and average variance extracted (AVE). As reported in Table 2, all retained indicators exhibited satisfactory outer loadings, ranging from 0.729 to 0.878, exceeding the commonly recommended threshold of 0.70. This indicates that the indicators adequately represent their respective latent constructs. Reliability was measured using Cronbach's alpha and Composite Reliability. Cronbach's alpha values ranged from 0.641 to 0.921, while composite reliability values ranged from 0.805 to 0.938. The constructs PEUAI (α = 0.820; CR = 0.877), SKAI (α = 0.819; CR = 0.879), SPEJ (α = 0.921; CR = 0.938), and SPWS (α = 0.810; CR = 0.887) demonstrated satisfactory reliability, and the indicators represent their constructs well (Hair et al., 2022). Moreover, convergent validity was assessed using AVE. The AVE values ranged from 0.580 to 0.724, exceeding the desirable threshold value of 0.50 for all constructs. Specifically, AVE values were 0.641 for PEUAI, 0.646 for SKAI, 0.715 for SPEJ, 0.580 for SPUAI, and 0.724 for SPWS. These results indicate that each construct explains more than 50% of the variance in its respective indicators; therefore, convergent validity is established.

Discriminant Validity

Discriminant Validity was assessed using the Heterotrait-Monotrait ratio (HTMT) (Henseler *et al.*, 2015), Fornell-

Larcker Criteria (Fornell & Larcker, 1981), and cross-loadings (Vinzi *et al.*, 2010).

Table 3

Heterotrait-Monotrait ratio (HTMT)

	PEUAI	SKAI	SPEJ	SPUAI	SPWS
PEUAI					
SKAI	0.682				
SPEJ	0.348	0.405			
SPUAI	0.857	0.739	0.437		
SPWS	0.626	0.617	0.478	0.359	

Table 3 shows that the HTMT ratio for all the constructs is below 0.85 (Henseler *et al.*, 2015), indicating that the constructs have discriminant validity. This suggests that the measures used for assessing these constructs in the research are distinct from each other and capture different aspects of the underlying constructs. Therefore, the study's measures demonstrate satisfactory discriminant validity, supporting the reliability of the research findings.

Table 4

Fornell-Larcker Criterion

	PEUAI	SKAI	SPEJ	SPUAI	SPWS
PEUAI	0.801				
SKAI	0.544	0.804			
SPEJ	0.319	0.372	0.846		
SPUAI	0.623	0.524	0.346	0.761	
SPWS	0.504	0.505	0.418	0.243	0.851

The Fornell-Larcker results, shown in Table 4, confirm discriminant validity across all constructs. The square root of AVE, reflected in the diagonal, shows that for PEUAI (.801), SKAI (.804), SPEJ (.846), SPUAI (.761), and SPWS (.851) exceed corresponding inter-construct correlations in their respective rows and columns. Notably, PEUAI-SPUAI (.623) and PEUAI-SKAI (.544) exhibit the strongest relationships yet remain below diagonal thresholds. These findings indicate each construct reveals more variance with its own indicators than with other constructs, establishing discriminant validity.

Table 5

Cross Loadings

	PEUAI	SKAI	SPEJ	SPUAI	SPWS
PEUAI1	0.776	0.544	0.188	0.504	0.465
PEUAI2	0.813	0.439	0.205	0.473	0.37
PEUAI3	0.837	0.393	0.342	0.508	0.357
PEUAI4	0.775	0.417	0.234	0.515	0.46
SKAI1	0.483	0.736	0.197	0.426	0.436
SKAI2	0.521	0.841	0.355	0.49	0.467
SKAI3	0.473	0.863	0.321	0.457	0.393
SKAI4	0.277	0.767	0.286	0.308	0.337
SPEJ1	0.371	0.259	0.821	0.303	0.34

SPEJ2	0.307	0.403	0.825	0.303	0.33
SPEJ3	0.266	0.244	0.875	0.243	0.297
SPEJ4	0.245	0.264	0.878	0.24	0.358
SPEJ5	0.246	0.306	0.849	0.304	0.37
SPEJ6	0.199	0.375	0.825	0.338	0.402
SPUAI1	0.424	0.424	0.285	0.786	0.118
SPUAI2	0.459	0.534	0.216	0.729	0.331
SPUAI3	0.542	0.273	0.28	0.767	0.142
SPWS1	0.509	0.592	0.376	0.255	0.863
SPWS2	0.335	0.259	0.35	0.092	0.858
SPWS3	0.436	0.426	0.34	0.273	0.832

The analysis indicates the degree to which each item loads onto its intended latent construct and other constructs. Generally, items should have higher loadings on their intended construct compared to other constructs, ensuring construct validity. In this analysis, most items demonstrate stronger loadings on their intended constructs, supporting the construct validity of the measurement model. Cross-loading values are within an acceptable range, confirming the alignment of items with their intended constructs.

Model Explanatory Power

Table 6

R square

	R-square	R-square adjusted
SPEJ	0.246	0.244

The R-squared value of 0.246 indicates that approximately 24.6% of the variability in the dependent variable (SPEJ) can be explained by the independent variables included in the regression model. The adjusted R-squared value of 0.244 is slightly lower, reflecting the penalty for including additional independent variables in the model. This suggests that a moderate proportion of the variability in the dependent variable (Hair *et al.*, 2022).

Structural Model Analysis

The structural model analysis was performed using a bootstrapping of 5000 sub-samples, resulting the hypothesized relationship as shown in Figure 2 and Table 7.

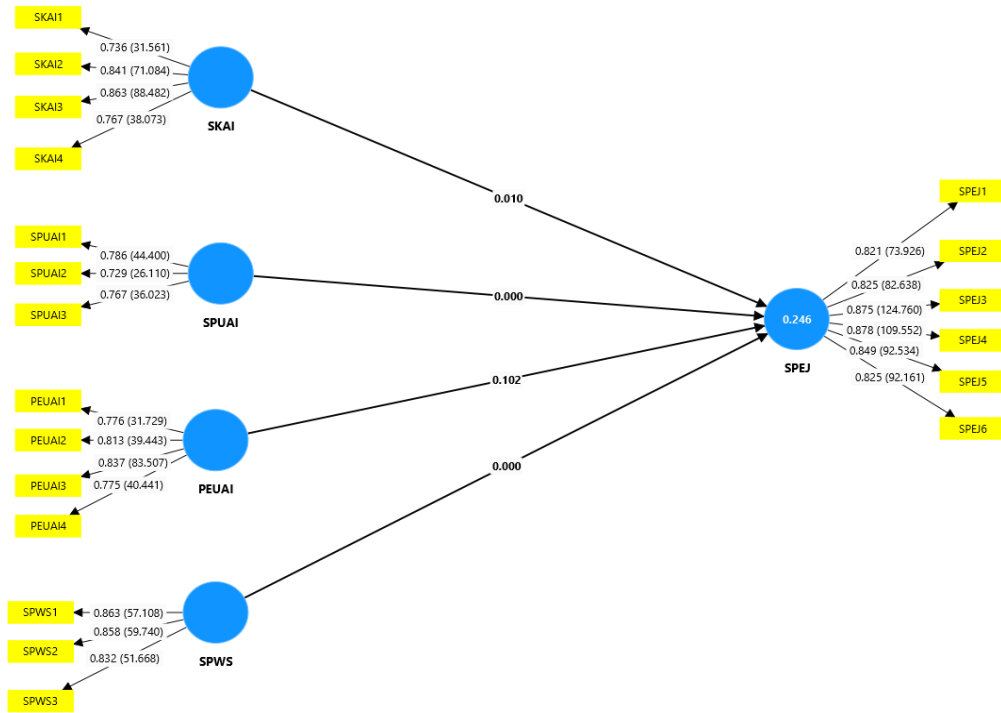


Figure 2

*Structural Model***Table 7***Path Coefficients*

Hypothesis		Path Coefficient	T statistics	P values	Decision
H ₁	SKAI -> SPEJ	0.107	2.583	0.010	Supported
H ₂	SPUI -> SPEJ	0.247	6.565	0.000	Supported
H ₃	PEUAI-> SPEJ	-0.061	1.634	0.102	Not Supported
H ₄	SPWS -> SPEJ	0.335	11.699	0.000	Supported

Influence of students' knowledge of AI on emerging job perception (H₁); the sample coefficient of 0.107 reveals a positive relationship between SKAI and SPEJ. The t-statistic, with a value of 2.583, coupled with a low p-value of 0.01, provides strong evidence to reject the null hypothesis. Consequently, the data supports the notion that SKAI significantly influences SPEJ. The decision to support this hypothesis is based on the robust statistical significance indicated by the low p-value, reinforcing the positive association between the variables in question.

Impact of students' perception of AI usefulness on emerging job perception (H₂); Table 7 exhibits a sample coefficient of 0.247 that signifies a positive relationship between SPUAI and SPEJ. The t-statistics, registering at 6.565, coupled with an extremely low p-value of 0.000, provide sufficient support for this hypothesis. This resounding statistical significance strongly supports the hypothesis that SPUAI significantly influences SPEJ. The practically zero p-value underscores the robustness of the findings, reinforcing the assertion of a significant positive association between the variables under consideration.

Students perceived ease of use of AI and emerging job perception (H_3); Table 7 reflects a sample coefficient of -0.061, which hints at a negative relationship between PEUAI and SPEJ. However, with a t-statistic value of 1.634 and a p-value of 0.102, the evidence falls short of reaching statistical significance at the commonly employed levels, such as 0.05. Consequently, there is insufficient support to reject the null hypothesis. In other words, the data does not provide compelling evidence to assert that PEUAI significantly influences SPEJ. The non-significant p-value suggests caution in making conclusions about the relationship between these variables, and the decision, in this case, is not to support the hypothesis of a significant impact of PEUAI on SPEJ.

Students' perception of future work skills and emerging jobs (H_4); Table 7 shows a sample coefficient of 0.335, indicating a positive relationship between SPWS and SPEJ. With a remarkably high t-statistic value of 11.699 and an exceptionally low p-value of 0, the evidence strongly supports rejecting the null hypothesis. This signifies robust statistical significance, providing substantial grounds to affirm the hypothesis that SPWS significantly influences SPEJ. The virtually zero p-value underscores the strength of the findings, reinforcing the assertion of a significant positive association between SPWS and SPEJ.

DISCUSSION

This study offers a subtle picture of how students perceive the relationship between artificial intelligence and the new job opportunities arising with AI. Perceived ease of use, by contrast, did not emerge as a significant predictor, a result that merits closer examination. However, three of the four hypothesized relationships were statistically supported, suggesting that students' knowledge of AI, their perceived usefulness of AI, and their perceptions of future work skills all meaningfully shape how they view emerging employment prospects.

AI Knowledge and Emerging Job Perceptions (H_1): There is a significant positive relationship between students' knowledge of AI and their perceptions of emerging jobs, which complement the viewpoint that AI literacy functions as a foundation for career optimism. The finding matches Lee *et al.* (2021), who reported that a deeper understanding of how AI systems operate is essential for students to engage with these technologies confidently and responsibly. The relatively modest effect size (compared to H_2 and H_4) suggests that knowledge alone is not the primary driver of career perception — it likely functions more as an enabling condition than a decisive one. Yet, it may be said that the students who understand the mechanics and applications of AI appear better equipped to envision themselves within AI-related career paths, rather than perceiving technology as an abstract or threatening force.

Perceived Usefulness and Emerging Job Perceptions (H_2): The study obtained a strong, significant relationship between perceived usefulness of AI and job perceptions ($\beta = 0.247$, $p < 0.001$) that aligns well with the applicability of the Technology Acceptance Model (Davis, 1989) in the AI context. This is consistent with Sing *et al.* (2022) and Chai *et al.* (2020), who found that optimism about AI's utility reduces anxiety and fosters more favorable engagement with the technology. Practically, this suggests that experiential exposure to AI's benefits, rather than abstract instruction alone, may be a more effective lever for shaping positive career outlooks; students who see tangible academic or practical value in AI tools appear to extend that positive evaluation into their expectations about the broader job market.

Perceived Ease of Use and Emerging Job Perceptions (H_3): The perceived ease of use revealed no significant relationship with job perceptions ($\beta = -0.061$, $p = 0.102$), and the direction of the coefficient was even slightly negative. One plausible explanation is that today's students, having grown up as digital natives largely immersed

in intuitive, AI-powered platforms (e.g., TikTok, YouTube, as noted by Lee *et al.*, 2021), may simply take ease of use for granted. This non-significant result diverges from classical TAM assumptions and warrants interpretation rather than dismissal. The ease of use may influence whether students adopt a given AI tool, but it does not appear to influence how they think AI's downstream effect on the job market. If usability is no longer a differentiating factor in students' everyday experience with technology, it follows that it would carry little weight in shaping their more abstract, forward-looking judgments about career opportunities. This suggests a conceptual distinction between usage-level acceptance and career-level perception that future models should account for separately.

Future Work Skills and Emerging Job Perceptions (H₄): There is a strong relationship in the model between students' perceptions of future work skills and their perceptions of emerging jobs ($\beta = 0.335$, $p < 0.001$). The finding reveals that students' career optimism is closely linked to their sense of readiness in skills. It aligns with Wang and Siau's (2019) view that AI is transforming the skill sets demanded by employers, and reflects that students who feel equipped with adaptable, future-oriented competencies, such as critical thinking, data literacy, and problem-solving, are considerably more likely to view the AI-driven job market as an opportunity rather than a threat. This result carries the clearest practical implication of the four: interventions aimed at building explicit future-work competencies may do more to shape positive career perceptions than general AI education alone.

CONCLUSION

Taken together, these results suggest that students' optimism about AI-related careers is driven less by how easy AI is to use and more by what they know about it, what value they perceive it to offer, and how prepared they feel to meet its demands. This pattern echoes the broader literature on the dual nature of AI's labor market impact (Fossen & Sorgner, 2019; Nubler, 2016): technology adoption alone does not resolve workforce anxiety, but a combination of literacy, perceived value, and skill preparedness appears to convert uncertainty into optimism. The findings also resonate with global projections of net positive job creation from AI (Gartner, 2017, as cited in Badet, 2021), suggesting that students' perceptions, when appropriately informed and skill-anchored, may be aligning with broader labor-market forecasts rather than public anxieties about displacement.

PRACTICAL IMPLICATIONS

The research findings recommend that curriculum development should focus on teaching and integrating AI into coursework and facilitating future employment readiness. Future-ready job skills, such as those related to data analysis, machine learning, and AI development, should be the focus of curriculum development. AI's significance for pedagogy and the learning process is undeniable, but the essay focuses on how students understand AI in relation to their education and potential career roles. There is a need to foster a comprehensive understanding of AI-related ideas, instruments, and abilities across various sectors, preparing students for new career prospects and influencing the expansion and advancement of the Data and AI Cluster. Students should be taught about the definition and content of AI to develop a favorable attitude towards its utility in their academic work and professional lives. Research program designers should create programs that help students become experts in these fields and stand out on the job market.

LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

The survey was conducted solely in universities in Karachi via a Google Doc form, limiting the geographical reach to other Pakistani universities. A reasonable generalization may be applied in that Karachi is a metropolitan city representing different demographics of the country. Yet it is imperative to perform a future study with data

collected across universities, colleges, and schools. A cross-sectional, quantitative design was employed by limiting the assessment of causality to different time frames. Therefore, longitudinal and/or quantitative design may be employed for a different perspective or deeper insight. Finally, this study research model may be tested with other factors and by adding more variables, either as independent variables, mediators, or moderators.

DECLARATION

Ethical Considerations: This study strictly adhered to the Declaration of Helsinki and relevant national and institutional ethical guidelines. All procedures performed in this study were consistent with the ethical standards of the Declaration of Helsinki. The study was conducted according to ethical and clinical standards for research.

Conflict of Interest: The authors have no conflicts of interest to declare for the publication of this study.

Consent for Publication: All participants were briefed on the aims and process of the research.

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Use of Artificial Intelligence (AI)- Assisted Technology for Manuscript Preparation: No AI tools were used for data extraction, statistical analysis, result interpretation, or the generation of original scientific content. All analyses were conducted by the authors, and they take full responsibility for the integrity and accuracy of the manuscript; however, we used AI for our questionnaire alignments, yet no AI was involved in conducting the test for the analysis.

Similarity Index/ Plagiarism: The similarity index was checked, and it is well below the threshold value of 19%, whereas each source is less > 5%.

REFERENCES

- Badet, J. (2021). AI, Automation and New Jobs. *Open Journal of Business and Management*, 09(05), 2452–2463. <https://doi.org/10.4236/ojbm.2021.95132>
- Baltà-Salvador, R., Brasó-Vives, E., & Peña, M. (2026). Evaluating AI-assisted creative ideation: A crossover study in higher education. *Thinking Skills and Creativity*, 59. <https://doi.org/10.1016/j.tsc.2025.101958>
- Chai, C. S., Wang, X., & Xu, C. (2020). An extended theory of planned behavior for the modelling of chinese secondary school students' intention to learn artificial intelligence. *Mathematics*, 8(11), 1–18. <https://doi.org/10.3390/math8112089>
- Chang, J., & Lu, X. (2019). The study on students' participation in personalized learning under the background of artificial intelligence. *Proceedings - 10th International Conference on Information Technology in Medicine and Education, ITME 2019*, 555–558. <https://doi.org/10.1109/ITME.2019.00131>
- Dabney, K. P., Tai, R. H., Almarode, J. T., Miller-Friedmann, J. L., Sonnert, G., Sadler, P. M., & Hazari, Z. (2012). Out-of-School Time Science Activities and Their Association with Career Interest in STEM. *International Journal of Science Education, Part B: Communication and Public Engagement*, 2(1), 63–79. <https://doi.org/10.1080/21548455.2011.629455>
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>
- Efri Ekaningrum, N., Syahrul Hidayat, M., & Yuliaty, F. (2023). Exploring the Future of Work: Impact of

- Automation and Artificial Intelligence on Employment. In *ENDLESS: International Journal of Future Studies* (Vol. 6, Number 1). <https://endless-journal.com/index.php/endless/125>
- Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. In *Source: Journal of Marketing Research* (Vol. 18, Number 1).
- Fossen, F., & Sorgner, A. (2019). *Mapping the Future of Occupations: Transformative and Destructive Effects of New Digital Technologies on Jobs*. 13(2), 10–18. <https://doi.org/10.17323/2500>
- Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM)*, 3rd ed. Sage.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Kim, S., Wang, Y., & Boon, C. (2021). Sixty years of research on technology and human resource management: Looking back and looking forward. *Human Resource Management*, 60(1), 229–247. <https://doi.org/10.1002/hrm.22049>
- King, R. B., & Caleon, I. S. (2021). School Psychological Capital: Instrument Development, Validation, and Prediction. *Child Indicators Research*, 14(1), 341–367. <https://doi.org/10.1007/s12187-020-09757-1>
- Kirsanov, O., Kushwah, L., & Selvarethnam, G. (2026). Beyond Detection: How Students Use—and Hide—AI in Online Assessments and What Authentic Tasks Can Do About It. *Journal of Academic Ethics*, 24(1). <https://doi.org/10.1007/s10805-025-09691-3>
- Lee, I., Ali, S., Zhang, H., Dipaola, D., & Breazeal, C. (2021). Developing Middle School Students' AI Literacy. *SIGCSE 2021 - Proceedings of the 52nd ACM Technical Symposium on Computer Science Education*, 191–197. <https://doi.org/10.1145/3408877.3432513>
- Nubler, I. (2016). *New technologies: A jobless future or a golden age of job creation?* <https://www.researchgate.net/publication/315408966>
- Parasuraman, A., & Colby, C. L. (2015). An Updated and Streamlined Technology Readiness Index: TRI 2.0. *Journal of Service Research*, 18(1), 59–74. <https://doi.org/10.1177/1094670514539730>
- Pillai, R. (2023). People's perception of AI and its effects on the Job market. *Research Archives of Rising Scholars*. <https://research-archive.org/index.php/rars/preprint/view/337/615>
- Rozman, M., Tominc, P., & Vrečko, I. (2023a). Building skills for the future of work: Students' perspectives on emerging jobs in the Data and AI Cluster through artificial intelligence in education. *Environment and Social Psychology*, 8(2). <https://doi.org/10.54517/esp.v8i2.1670>
- Rozman, M., Tominc, P., & Vrečko, I. (2023b). Building skills for the future of work: Students' perspectives on emerging jobs in the Data and AI Cluster through artificial intelligence in education. *Environment and Social Psychology*, 8(2). <https://doi.org/10.54517/esp.v8i2.1670>
- Rožman, M., Tominc, P., & Vrečko, I. (2023c). Building skills for the future of work: Students' perspectives on emerging jobs in the Data and AI Cluster through artificial intelligence in education. *Environment and Social Psychology*, 8(2). <https://doi.org/10.54517/esp.v8i2.1670>
- Salim, A., Masan, M., & Othman, K. B. (2023). The role of human resource management practices on the change management practices in the Dhofar Municipality of the Sultanate of Oman. In *Journal of Reproducible Research (JRR) Issue* (Number 1).
- Selenko, E., Bankins, S., Shoss, M., Warburton, J., & Restubog, S. L. D. (2022). Artificial Intelligence and

- the Future of Work: A Functional-Identity Perspective. *Current Directions in Psychological Science*, 31(3), 272–279. <https://doi.org/10.1177/09637214221091823>
- Sing, C. C., Teo, T., Huang, F., Chiu, T. K. F., & Xing wei, W. (2022). Secondary school students' intentions to learn AI: testing moderation effects of readiness, social good and optimism. *Educational Technology Research and Development*, 70(3), 765–782. <https://doi.org/10.1007/s11423-022-10111-1>
- Toar, D., Sumakul, Y. G., Hamied, A., & Sukyadi, D. (2022). *Students' Perceptions of the Use of AI in a Writing Class*. <https://www.plot-generator.org.uk/>.
- Trajtenberg, M. (2018). *AI as the Next GPT: A Political Economy Perspective*.
- Vincent-Lancrin, S., & Van Der Vlies, R. (2020). *Trustworthy artificial intelligence (AI) in education: Promises and challenges*. <https://doi.org/10.1787/a6c90fa9-en>
- Vinzi, V. E., Chin, W. W., Henseler, J., & Wang, H. (2010). *Handbook of Partial Least Squares Concepts, Methods and Applications*. Springer.
- Wang, W., & Siau, K. (2019). Artificial intelligence, machine learning, automation, robotics, future of work and future of humanity: A review and research agenda. *Journal of Database Management*, 30(1), 61–79. <https://doi.org/10.4018/JDM.2019010104>

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