

Artificial Intelligence Skills and Employability of Management Graduates: The Mediating Roles of Awareness and Adaptability

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HOW TO CITE:

Guggilapu Anil Chandra Prasad, Simanchala Das (2026). Artificial Intelligence Skills and Employability of Management Graduates: The Mediating Roles of Awareness and Adaptability. International Journal of Special Education, 41(6s), 625-634.

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ABSTRACT:

This paper has looked into how skills in Artificial Intelligence (AI) can influence employability of management graduates, and more precisely how awareness and adaptability mediate the relation between the two variables. With a quantitative research and explanatory design, data was collected in the form of primary data on 320 management graduates using a structured questionnaire. Structural Equation Modeling (SEM) was used to analyze the data in order to determine both direct and indirect correlations between the variables. The results showed that AI abilities have a strong and positive impact on employability. Also, awareness was determined to mediate this relationship partially, along with adaptability, which suggests that cognitive awareness of the trends in AI and behavioral flexibility contribute to the value of technical skills partially. The mediation effect on adaptability was relatively higher than the awareness. The research finds that employability in the contemporary labor market is not only dependent on AI skills but also the capacity of an individual person to comprehend and adjust to technological developments, which give significant education and policy implications.

Keywords: Artificial Intelligence Skills, Employability, Awareness, Adaptability, Management Graduates, Structural Equation Modeling.

Introduction

The shift to a dynamic, fast developing Artificial Intelligence (AI) technologies has fundamentally changed the overall labor market, reworking the demands in skills and employability relationships of management graduates. Automation, data

analytics, and intelligent systems are being influenced by AI, thus transforming organizational operations and subsequently enhancing graduates' need to have higher digital skills, cognitive adaptability, and adaptive learning skills (Cheng et al., 2025). In that sense, employability is no longer

associated with expertise in the conventional academic domain but more and more relies on the development of AI-related skills, such as machine learning literacy, data interpretation and capability of solving digital problems.

Management graduates specifically will be required to incorporate AI in the strategic decision making, operations, marketing analytics and human resource management. Nevertheless, the problem of education-to-employment transition is still hard because the skills that graduates are prepared to offer to the industry do not align with industry expectations (Zeng et al., 2025). This disconnection highlights the need to not only acquire AI skills but also build awareness and adaptability, which are crucial in improving the level of employability.

Awareness of AI technologies is to be understood as an understanding in an individual in terms of the opportunities, risks and implications of AI in the workplace. It has been found that awareness on AI has a positive impact on perceptions of employability, career readiness and risk assessment among the students (Liang and Zhai, 2025). Simultaneously, flexibility akin to adapting to the technological shift and constantly renewing one's capabilities has turned into a major skill to develop in order to find your way in the AI-driven jobs. Flexibility will help the graduates to adapt efficiently to the change in job roles thus enhancing their job prospects.

The recent empirical studies point to the fact that AI skills do have a beneficial impact on employability; such relationships are mediated by skill development, technological preparedness, and learning orientation (Arooje et al., 2025). This implies that having the technical skills might not be an adequate requirement; graduates should also have awareness and adaptability in order to maximize on these skills in the labor market. In its turn, the proposed study will focus on analyzing how AI skills will affect the employability of management graduates, including through the mediation of awareness and adaptability.

Literature Review

There has been a tremendous research on the relationship between skills in Artificial Intelligence and their relation to employability in recent academic literature, especially in fourth industrial revolution. The AI is accepted as a disruptive technology that changes job design, skill needs, and employee skills (Frey and Osborne, 2017). The rise in automation of routine operations has pushed the demand to more advanced skills including analytical skills, creativity, and digital literacy.

In the current labor markets, AI skills have been regarded as fundamentally important factors governing employability. Ramos (2025) asserts that graduates with AI skills are more employable, as they can undertake more complex data-driven tasks and can adjust to technological conditions. Likewise, Bresnahan et al. (2020) posit that the digital and AI-related skills are strongly associated with job opportunities and increased employment opportunities due to their abilities to make work more productive and innovative. Empirical evidence supports this conclusion, showing that the adoption of AI is positively and significantly associated with the outcomes related to employability (Arooje et al., 2025).

Nevertheless, the review of literature also presents issues that might be related to the implementation of AI, such as unemployment and the disappearance of skills. This fact highlights the need to constantly upgrade their skills, hence lifelong learning becomes even more significant in today's environment with AI (Arntz et al., 2016). This view is similar to that proposed by Kalleberg (2018) that states the employability is becoming increasingly contingent on the capacity of an individual to adjust to technological advances.

Consciousness of AI is influential in the determination of employability. Liang and Zhai (2025) established that AI awareness impacts the perceptions of students about the risks and opportunities of employment, and the higher the awareness the more the informed the choice of career. Moreover, Zhang (2026) was able to demonstrate that awareness of AI in conjunction

with career education makes a notable contribution to career development and employability outcomes.

Although AI awareness is positive, it can also have a negative implication. A study by Liang et al. (2025) reveals that over-awareness of the risks associated with AI is likely to cause anxiety and reluctance to adopt technologies hence adversely influencing innovation and employability. This twofold impact begs the idea that the awareness is a dual mediating variable that has both positive and negative effects on employability based on the contextual aspects.

Flexibility has become a key skill in the AI-powered workforce. It is the capability of an individual to adapt to new technologies, work conditions, and job demands. Lundvall et al. (2016) underline that adaptability increases the learning capacity and acquiring new skills, thus, enhancing employability.

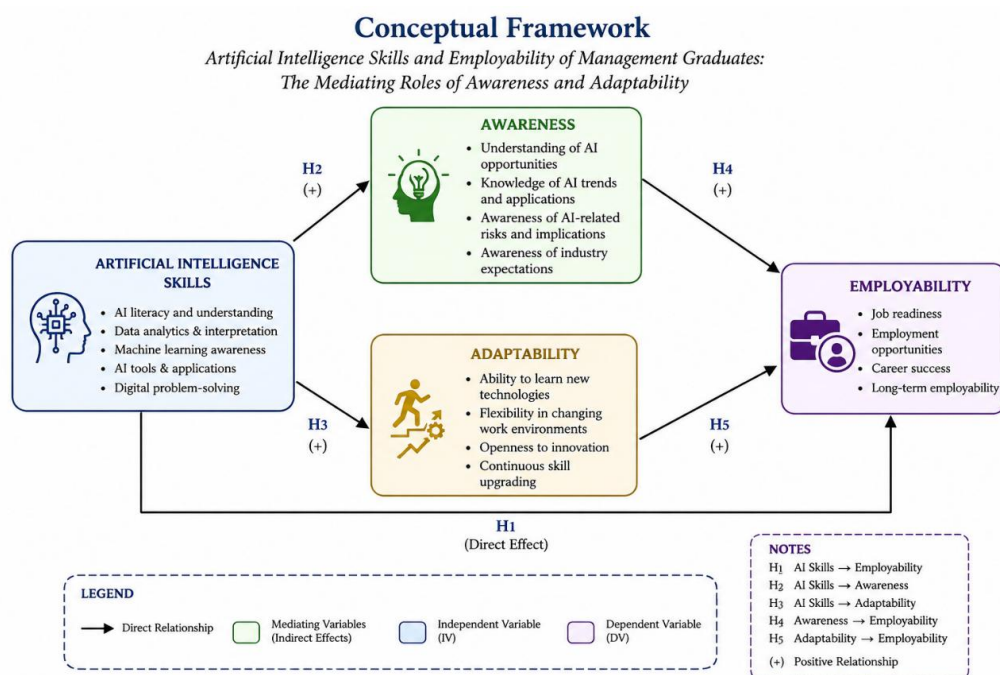
Empirical research has shown that adaptability greatly mediates the correlation of technological skills and employability. As an example, highly adaptable people have more chances to make the best use of AI tools and react to the shifting job requirements (Bessen, 2019). Likewise, the

technological readiness, a concept that is closely connected with the concept of adaptability, has proven to enhance a connection between the skills of AI and the employability (Arooje et al., 2025).

Integration of the mediation variables awareness and adaptability offer a more detailed explanation on the AI-employability relationship. Handayani (2026) discovered that AI awareness and job market knowledge play a significant role in graduate outcomes in the form of employability skills. This implies that within an awareness setup, the skill acquisition process will be more effective than in the absence of awareness, and with adaptability, individuals participating in such skills development will be able to apply the obtained skills to dynamic settings.

In addition, recent research also highlights the relevance of integrating cognitive and behavioral proficiencies in order to optimize employability. Graduates who not only know the trends of AI but can adapt to the changes in technology stand a better chance of prevailing in the labor market (Oñ Dea, 2025). This combined strategy accentuates the necessity of educational institutions to emphasize the global training of skills, instead of the technical one.

Conceptual Framework:



The theoretical framework depicts the relationship between the capabilities of Artificial Intelligence (AI) and employability of management graduates and locations of middle grounds of awareness and flexibility. The independent variable is AI skills and will consist of such competencies as AI literacy, data analytics, machine learning knowledge, using AI tools to address problems. These will result in direct enhancements in employability (H1) such that more AI proficient graduates will be more predisposed to reach greater job preparedness, access more employment opportunities, and career success in the long run. Yet, the framework goes beyond a direct relationship and proposes two significant mediators (knowledge and adaptability) to explain how and why AI skills define employability.

Awareness is the first type of mediating variable and is the ability to demonstrate the knowledge of the graduate regarding the AI trends, opportunities, risk, and industry expectations. The framework indicates that AI skills have a positive effect on awareness (H2), i.e. people who are technologically more exposed to AI are more prone to gain a better insight into the applications and implications of AI in the job market. Awareness, in its turn, also makes graduates employable much better (H4) since informed graduates have a better ability to adjust their competencies to the needs of the market, make informed career choices, and address the changes in the workplace environment. Therefore, awareness is a cognitive process that enhances the influence of AI skills on employability.

The second mediating variable is adaptability that is the behavior component of the framework. It includes the ability to embrace the new technology, flexibility in embracing evolving work conditions and lifelong skill updating. The model demonstrates that AI skills have a positive influence on adaptability (H3) and we might say that the AI exposure will result in the attitude of being always learning and innovative. Adaptability, in its turn, has a positive effect on the employability (H5), since individuals that can get less dependent on technological disruptions and organizational changes will be more valuable in the

dynamic labour markets. This places the adaptability as a high-value skill that will enable the graduates to apply their skills in AI to real-life scenarios.

Overall, the framework indicates direct and indirect pathways through which the AI capabilities impact the employability. Although the capabilities of AIs are directly related to their employability, they are highly enhanced in a context with the addition of awareness and manoeuvrability. The dual mediation model demonstrates that the technical competence is not the whole basis of employability but rather cognitive knowledge and behavioural flexibility. By considering the holistic approach, it provides a wide perspective of the reality that management graduates do not only have to study AI, but also have the sense of how the technological trends run and can be flexible enough to keep up with the regular changes of the modern labour market.

Methodology:

The study methodology consisted of a quantitative, explanatory study to evaluate the impact of Artificial Intelligence (AI) skills level on the employability of management graduates with awareness and adaptability as mediating variables. Primary data about the target population of management graduates and final year students of Nagpur area was collected in the form of a structured questionnaire with 5-point Likert scale. A sample of approximately 320 respondents was selected through stratified random sampling to provide representation to them in different specialization such as in the field of marketing, finance and human resource management.

Results and Discussion

The section of data analysis and interpretation identified the correlation of Artificial Intelligence (AI) skills and employability of management graduates with the mediation of the concept of awareness and adaptability. It was examined using statistical technique of descriptive statistics, correlation analysis, Confirmatory Factor Analysis (CFA), and Structural Equation Modeling (SEM). These steps enabled determination of the direct and indirect relationships among the variables in a

systematic manner. Outcomes provided empirical information to justify the connection between AI competencies and employability outcomes and the extent to which awareness and adaptability intervene to act as mediators to give a complete picture of the original conceptual design.

Table 1 Descriptive Statistics

Variable	Mean	Std. Deviation
AI Skills	3.92	0.61
Awareness	3.85	0.58
Adaptability	3.78	0.64
Employability	3.88	0.59

The descriptive statistics revealed that there was a moderate high level of the Artificial Intelligence (AI) skills, awareness, and adaptability and employability among the respondents as indicated

by the mean scores above 3.5 of a 5-point Likert scale. The largest mean (3.92) was observed in AI skills meaning that management graduates are quite familiar with AI tools and technologies. The awareness (3.85) and employability (3.88) were also high and hence those individuals are quite well-informed about the trends in AI and the respondents believe that they can be hired. Adaptability, though with a margin slightly lower (3.78) has a positive tendency of learning and adapting to the technological changes. These mean low values of the standard deviation of the variables and this indicates there is uniformity in the answers implying homogeneous sample. Generally speaking, the findings indicate that the respondents are quite ready to AI-oriented job market, yet it is possible to do better, which is largely related to flexibility.

Table 2 Correlation

Variables	AI Skills	Awareness	Adaptability	Employability
AI Skills	1	0.62**	0.58**	0.65**
Awareness	0.62**	1	0.55**	0.60**
Adaptability	0.58**	0.55**	1	0.63**
Employability	0.65**	0.60**	0.63**	1

According to the correlation table, all the variables of interest have close and positive correlations. The positive correlation between AI skills and employability ($r = 0.65$) suggests that an increase of AI skills correlates with improved employability results. Equally, the relationship between AI skills and awareness ($r = 0.62$) and adaptability ($r = 0.58$) indicates that AI knowledgeable individuals are more knowledgeable about the advances in technology and adaptable to change. Awareness and adaptability also have substantive relations with employability ($r = 0.60$ and $r = 0.63$ respectively) which suggest its involvement as a significant factor in the development of career readiness. These relationships are statistically relevant as the level of significance ($p < 0.01$) serves to verify this. Altogether, the correlation findings give the preliminary evidence of the proposed model, which suggests that all variables are related to each other and can be analyzed with the use of SEM.

Table 3 CFA Results

Construct	Factor Loadings	CR	AVE
AI Skills	0.72–0.88	0.89	0.62
Awareness	0.70–0.85	0.87	0.59
Adaptability	0.68–0.86	0.88	0.60
Employability	0.74–0.89	0.90	0.65

The results of the CFA show that the model of measurements is highly reliable and valid. All the loadings of the factors are more than the suitable level of 0.60, which confirms that all the observed variables correspond to their latent constructs. All constructs have Composite Reliability (CR) values of more than 0.70, meaning a high level of internal consistency and reliability. To augment this, the value of the Average Variance Extracted (AVE) is greater than 0.50, and this implies a strong explanatory power by the constructs in their indicators. These findings indicate that measurement scales employed in the study are

effective and valid in terms of depicting AI skills, awareness, adaptability, and employability. Thus, the model can be used in a further structure analysis. These high-quality measurement properties boost the validity of the results in the study carried out, and the ensuing SEM results will be anchored on a solid foundation.

Table 4 SEM Indices

Index	Value	Recommended
CFI	0.94	> 0.90
TLI	0.93	> 0.90
RMSEA	0.052	< 0.08
SRMR	0.045	< 0.08

The model fit indexes show that the structural model and data fit well. Both Comparative Fit Index (CFI = 0.94) and Tucker-Lewis Index (TLI = 0.93) are greater than the advised difference of 0.90 which implies that the model proposed is well-fitted to the observed data. RMSEA = 0.052 is lower than the acceptable value of 0.08, which means that it fits reasonably well. On the same note, the SRMR (0.045) lies well within the acceptable limits which once again support the appropriateness of the model. All these indices indicate that the relationships between AI skills, awareness, adaptability, and employability hypothesized are highly supported by the data. The validity of the structural relationships is enhanced by the good model fit and gives one confidence in the interpretation of the path coefficients and mediation effects in the analysis that follows.

Table 5 Path Coefficient

Path	Beta	t-value	p-value	Result
AI Skills → Employability	0.32	4.85	0.000	Supported
AI Skills → Awareness	0.62	8.12	0.000	Supported
AI Skills → Adaptability	0.58	7.45	0.000	Supported
Awareness → Employability	0.28	3.96	0.000	Supported
Adaptability →	0.35	5.21	0.000	Supported

Employability				
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The findings of the SEM path analysis assure that all the hypothesized relationships are statistically significant. There is a direct positive relationship between AI skills and employability ($\beta = 0.32$), meaning that the greater AI skills, the more job-ready an individual is. Awareness ($\beta = 0.62$) and adaptability ($\beta = 0.58$) are also strongly affected by AI skills implying that technical competence can bring about both cognitive insight and behavioural flexibility. Moreover, awareness ($\beta = 0.28$) and adaptability ($\beta = 0.35$) can significantly influence employability, which further proves the importance of the two as the sources of career success. Adaptability is a phenomenon that has a somewhat stronger influence among the mediators which has shown how important it is in dynamic working settings. These t-values and significant p-values (less than 0.001) support the strength of these relationships. On balance, the findings give strong evidence to the hypotheses made and prove the conceptual framework.

Table 6 Mediation Analysis

Indirect Path	Effect	p-value	Result
AI Skills → Awareness → Employability	0.17	0.000	Partial Mediation
AI Skills → Adaptability → Employability	0.20	0.000	Partial Mediation

Both awareness and adaptability have a significant mediating role in the relationship between AI skills and employability, as indicated by the mediation analysis with bootstrapping. The indirect effect via awareness (0.17) denotes that AI skills increase employability through the increased knowledge about AI trends and employment requirements among graduates. On the same note the influence via adaptability (0.20) is a little bigger, implying that the power to adapt to technological shifts has a more significant role in converting AI skills into employability results. Because the direct impact of the AI skills on employability is still considerable

along with the indirect, the mediation can be described as partial. This means that AI skills have both a direct and indirect impact on employability via the mediators. The findings point to the significance of the emergence of not only technical skills but also awareness and adaptability to access the maximum employability in AI-driven settings.

Discussion

The results of the research were good empirical evidence to the proposed conceptual frame of reference as they confirmed that the skills of Artificial Intelligence (AI) have a strong direct and indirect impact on the employability of management graduates via awareness and flexibility. The significant, though positive correlation between AI skills and employability suggests that graduates who have AI tool skills, like data analytics, data tools use, and problem-solving using digital tools, will be in a better opportunity to fulfill the changing job market demands. This is in line with current trends in the labor market where employers are increasingly focusing on technologically skilled workers who will be able to make data-driven decisions and innovations. The findings support the idea that AI competencies have become one of the key factors of career preparedness within the contemporary business environment.

The paper also proves that AI skills produce a tremendous impact on raising awareness, which, in its turn, have a positive impact on the employability. This observation suggests that without having a clear vision of the AI trends, uses, and impacts in the workplace, technical know-how cannot suffice. The awareness level enables graduates to align their competencies according to industry demands, make an informed decision on their careers and predict skill needs they will acquire in the future. The mediation role of awareness points to the importance of cognitive process in which skills of AI could be transferred into the employability. It also implies, however, that to achieve higher awareness levels, schools must not only encourage technical training but also include industry-oriented research along

with case-based learning and introduce students to actual AI application so that they could put it into perspective.

Adaptability concept was detected to be a particularly powerful mediator of the connection amid AI skills and employability that demonstrates that behavioral flexibility is a substantial factor determining how the technical skills can be converted into an advantage. Graduates who demonstrate the ability to continue learning, stay abreast of emerging technologies, and respond to the evolving labour markets are more likely to succeed in the AI-related industries. The larger indirect effect through the means of adaptability means that even more significant is the capacity to adapt and evolve than awareness in specific scenarios. It is an observation that is linked to a growing importance of lifelong learning and workforce agility, in which stagnant skills are fast becoming obsolete. Therefore, flexibility is a key enabler that can help individuals to make good use of their AI resources in diverse and ever-changing companies.

The existence of a partial mediation means that the use of AI skills could influence the workability through multiple channels, both direct and indirect ones. This brings out the multi-dimensional nature of employability that cannot merely be identified by technical skills only but equally through behavioral and cognitive skills. By adding conscientiousness and flexibility to the model, one will have a more detailed understanding of the process of moving between training and working of graduates in an economy where AI is pragmatized. It underlines the need of the balanced approach to the development of skills that integrate technical and soft skills and strategic awareness.

Theoretically, the study will be a valuable contribution to the existing literature because it will propose the models of employability when applied to AI-related competencies and mediating processes. It substantiates the suitability of the application of technological, cognitive, and behavioral aspects in an effort to understand the implication of employability. Practically, the

implications of the results have an important bearing on educational institutions, policy makers, and the industry stakeholders. The management education programs are also expected to incorporate AI oriented programmes, hands on programs and change resilient training programs to equip graduates to get into the workforce more effectively. Further, businesses have to focus on the ongoing training and development programs that can help staff to become more flexible and sensitive.

Overall, the discussion has shown that despite the significance of the AI skills, they can make a sufficient contribution to the improving employability solely when the awareness and flexibility go hand in hand. Such an intrinsic mix plays a crucial role in preparing graduates in management to fit in a more progressive and technological world of work.

Conclusions

The study established that Artificial Intelligence (AI) skills contribute to management graduates employability hugely and positively. The empirical data found out that the graduates possessing the following competencies are more able to respond to the new demands of the contemporary workforce: data analytics, using AI tools and resolving digital problems. The causal character of AI levels and employability suggested that technical knowledge regarding the new technologies have become the definite determinant of the career preparedness and utilization of higher-order knowledge in the contemporary labor market.

Moreover, the research found out awareness and adaptability as a major mediating variable in this correlation. It was also found that the awareness enhanced the employability as it assisted the graduates to be sensitive of the trends in AI, industry expectations and ramification of technological change. The mental aspect helps individuals to take good career decisions and align their talents with the market. Rather, adaptability was a powerful behavioral variable as it was found to show how graduates could adapt to technological changes, demonstrate how graduates

can portray continuous learning and flexibility in ad hoc workplace environment. The higher mediating role of adaptability means that it is the ability to adapt based on job position and technology over the long run that indicates long term employability.

The presence of partial mediation indicated that the skills acquired through AI affect employability both directly and indirectly through the concepts of awareness and adaptability. This reinforces the fact that the notion of employability is a multidimensional characteristic and, therefore, it involves the technical as well as the cognitive knowledge and behavioural adaptability. In general, the study provided a detailed background to show how the seamless integration of AI competencies, awareness, and adaptability can be the key to employability of management degrees in an AI-based economy.

Recommendations

Based on the calculated findings of the research, several recommendations can be provided to the school institutions, students and policy makers:

1. Curriculum Enrichment: There should be AI aspects in the management school and college curriculums: data analytics and the foundations of machine learning, as well as AI in business. This will be done by seeing the students acquire suitable technical expertise as per the industry requirements.
2. Skill Development Programs: To raise more hands-on exposure, institutions are welcome to organize workshops, certifications and practical trainings on AI tool and technologies. It is also able to closely collaborate with industry professionals to enrich the skill development programs.
3. Awareness Building Grids: Seminars, as well as the lectures of the different industry players, will have to be conducted on a constant basis so as to help them build awareness of AI trends, careers and potential concerns among the students.

This will help the students to make useful career choices.

4. Consider Adaptability and Soft Skills: Education programs will be based on the development of adaptability, critical thinking and problem-solving. It is possible to promote flexibility and lifelong learning using such activities as case studies, simulations and project learning.
5. Industry-Academia Collaboration: Educating with industries should encourage healthy contact with industries in order to become the bridge between the theory and its practice within the knowledge. Internship programs and live projects can be used to increase the exercisability.
6. Constant Culture of Learning: It needs to be a school culture to encourage students

to learn in life, and do online lessons, certifications, independent learning websites in order to keep up with technological advances.

7. Policy Support: The policy makers are advised to promote programs to assist in training and education of higher education level on digital skills in order to be equipped to accept jobs in the future.

In summary, a holistic, multi-layered approach that includes AI capability, coupled with knowledge and versatility is important in order to improve employability. Stakeholder will be better placed to provide management graduates with a better opportunity to compete in a rapidly evolving job market that is highly technology oriented with these recommendations.

References

- Arooje, K., Ijaz, H., Haq, M. M. U., Fatima, S. M., & Sajid, M. (2025). The influence of artificial intelligence on employability: Mediating effects of skill development. *South Eastern European Journal of Public Health*, 26(S1), 3013-3026.
- Arntz, M., Gregory, T., & Zierahn, U. (2016). The risk of automation for jobs. *OECD Social, Employment and Migration Working Papers*, 189(1), 1-34.
- Bessen, J. (2019). AI and jobs: The role of demand. *NBER Working Paper Journal*, 24235(1), 1-40.
- Bresnahan, T., Brynjolfsson, E., & Hitt, L. (2020). Information technology and productivity. *Review of Economics and Statistics*, 102(2), 245-256.
- Cheng, S., et al. (2025). The influence of employability skills on quality of employment. *Humanities and Social Sciences Communications*, 12(1), 1-15.
- Frey, C. B., & Osborne, M. A. (2017). The future of employment. *Technological Forecasting and Social Change*, 114(1), 254-280.
- Handayani, F. (2026). AI knowledge and job market awareness. *Review of International Geographical Education*, 14(2), 14868-14880.
- Kalleberg, A. L. (2018). Precarious work and employability. *American Sociological Review*, 83(2), 1-28.
- Liang, Y., & Zhai, Y. (2025). AI awareness and employment risk perception. *Acta Psychologica*, 235(1), 105808.
- Liang, Y., et al. (2025). AI awareness and digital innovativeness. *SAGE Open*, 15(3), 1-15.
- Lundvall, B. A., et al. (2016). Learning economies and employability. *Research Policy*, 45(8), 1503-1514.
- O'Dea, X. (2025). Graduate attributes in the age of disruptive technology. *Artificial Intelligence in Education Journal*, 1(1), 144-158.
- Ramos, H. C. P. (2025). AI skills and employability of graduates. *Education and Information Technologies*, 30(4), 1-20.

- Zeng, Y., Santaveesuk, P., & Budsara, T. (2025). AI and graduate employment. *International Journal of Environmental Sciences*, 11(20), 544–552.
- Zhang, J. (2026). AI awareness and career education. *British Journal of Guidance & Counselling*, 54(2), 1–18.