

Thriving in Uncertainty: The Relationships between Future Job Predictions, Learning Agility, Responsive Attitude, and Adaptability

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Abstract

Background: The 2023 World Economic Forum report indicates that the influence of Artificial Intelligence (AI) and automation on the labour sector was more significant than initially anticipated. While a 2018 study predicted substantial employment losses offset by job creation, recent evidence suggests a different outcome.

Objectives: This study aims to identify the principal determinants affecting the adaptability of college graduates in Indonesia. The study equally measures the intensity of the interactions among these variables to comprehend their collective impact on graduate adaptability.

Methodology: The researchers used descriptive survey research in this study, examining 284 Indonesian ICIL policy students who were selected using the purposive sampling technique. A structured questionnaire was used to collect data for the study. This study employed quantitative analysis, using Structural Equation Modeling (SEM) with SmartPLS 4.0.

Results: It was found that job trend forecasting significantly affects responsiveness, with a correlation coefficient of 0.69, while responsiveness strongly influences learning agility, with a coefficient of 0.43. However, there exists no significant direct correlation between job trend forecasts and adaptability (t -value = 0.56).

Conclusion: Adaptability is a multidimensional concept that incorporates job forecasting trend analysis, responsive practices, and learning accelerators. Institutions ought to improve their human resources tactics to better equip graduates for the ever-evolving job market.

Unique Contribution: This study has provided empirical evidence that could guide policies and programmes for preparing graduates for the labour market.

Keywords: Adaptation Abilities, Job Prediction, Learning Agility, Responsive Attitudes, Digital Technology Revolution.

Introduction

The policy of The Independent Campus Independent Learning (ICIL) strategy, launched by the Ministry of Education, Culture, Research, and Technology of the Republic of Indonesia in 2020, was anticipated to face considerable obstacles due to

unpredictable external factors. The National Labor Force Survey (Sakernas, 2024) performed by the Central Statistics Agency (BPS, 2024) reported that in February 2024, Indonesia had 7.195 million unemployed persons. The unemployment rate for diploma and college graduates was 5.49%, equating to roughly 0.395 million individuals (BPS, 2024). This high unemployment rate is a pressing issue that demands urgent attention and proactive measures. Addressing this challenge requires a combination of strategic policies in the higher education sector to better align curricula with job market demands, as well as initiatives in the business sector to stimulate job creation and provide opportunities for graduates.

The 2023 World Economic Forum report indicates that the influence of Artificial Intelligence (AI) and automation on the labour sector was more significant than initially anticipated. While a 2018 study predicted substantial employment losses offset by job creation, recent evidence suggests a different outcome. From 2023 to 2027, it is projected that 69 million new jobs will emerge due to developments in AI; however, this will be counterbalanced by eliminating 83 million jobs, resulting in a net reduction of 14 million jobs globally. Positions associated with AI, digitalisation, and sustainability, including AI specialists and renewable energy engineers, are anticipated to expand, but roles in clerical and administrative fields are most susceptible to reduction (World Economic Forum, 2023). This transition highlights the inevitability of job changes and the urgency for reskilling and adaptation to changing sectors since around 44% of workers' abilities will be disrupted by 2027. The necessity for analytical thinking, technological proficiency, and adaptability will escalate as organisations progressively embrace frontier technologies (World Economic Forum, 2023).

However, the amount of work on predicting changes in graduates' employment patterns due to adaptability indicates that it is limited at best and often contradictory. Studies suggest that adaptability, an ability to adjust cognitively, behaviorally and emotionally in new, different or uncertain circumstances, is critical for predicting academic professional success (Holliman et al. 2021). However, the study has not looked at whether adaptability influences psychological well-being.

Heterogeneity and generalisability need further investigation (Zenebe et al., 2021). Lastly, predictors of psychological well-being are adaptability and social support (Ryan & Deci, 2017) which should be explored as affective variables to investigate their differentiated effects respectively (Buzzai et al., 2020). Based on the gaps in previous literature, this study aimed to explore various government policies, such as the MBKM initiative. That is, challenge graduates in workspaces.

The purpose of this study was to (1) identify the key variables that influence adaptability among Indonesian college graduates, (2) assess relationship strengths between them and combine effects on graduate life-long adaptation, and (3) generate theoretical recommendations for policy and practical implications based on the results mentioned above will further improve ICIL.

Literature review and hypothesis development

Predicting Future Job Trends (PFJ) and Fostering Responsive Learning

In terms of curricula at colleges and universities, these are largely focused on academic aspects of the course, especially about specific courses. Career exploration in the early stages promotes flexibility, which is essential for achievement later (Tokar & Kaut,

2018). Despite its benefits in nurturing critical-minded professionals of tomorrow, these strategies are seldom adopted by colleges and universities (Ashour, 2020).

Learning agility (LA) by (Murphy, 2021; De Meuse et al., 2010) helps deal with uncertainties and create new values. Point out that the ability to adapt to careers is a human lifelong learning process that can be achieved automatically by young people themselves (Öztemel & Akyol, 2021; Suseno et al., 2021). An individual's emphasis on protean career orientation. This leads to the following hypothesis:

H1: The sharper the ability to predict future job, the higher the responsiveness.

1.1 *Predictions of Future Job Trends and Learning Agility*

Students and parents are paying a premium for the ability to forecast employment trends, establish LA in accompanying university studies or participate. According to Strielkowski et al., (2020), emotional regulation has an important effect on career adaptability and job search success. Demonstrated that reducing anxieties like stress, social anxiety, or frustration improved self-restraint and confidence in oneself, which can become an advantage. George and Park (2022) mentioned some of the focused training intersessions, like mock interviews, along with stress control.

The study of Jian et al. (2022) saw LA as an intervening factor in the relationship between ASE and long-term learning outcomes. LA challenges its users to understand and apply new information quickly (De Meuse, 2010; Suseno & Barowi, 2023). Finally, EI and LA play a significant role in predicting students' career success. A hypothesis was formulated.

H2: The better students can predict future career trends, the greater the chances of career success.

The Relationship between Responsive Attitude (RA) and Learning Agility

Higher education is grappling with theoretical knowledge, and the media needs to bring that in balance with helping students learn practical skills, so they are prepared for something more uncertain and less stable than ever already (Wrigley et al., 2021; Munawir & Suseno, 2024). When it comes to emphasising theory, graduates may exit school unprepared for the labour market needs (Gunzenhauser, 2021), and overemphasising practical skills can fail to promote adaptational capacities and problem-solving capabilities in the dynamics of daily life. Learning Agility (LA) helps students gain the ability to learn quickly, use knowledge in new situations, develop adaptability, synthesise information, and understand diversity (Alhadabi & Karpinski, 2020; Wulandari et al, 2024). A responsive attitude (RA) to environmental change increases learning capabilities and adaptation speed, supporting an education system that balances high theoretical loads with hands-on practical skills to foster adaptive, globally responsible actors. Based on insights from previous literature, the following hypothesis is proposed:

H3: The stronger the responsive attitude, the higher the learning agility.

The Correlation Between Responsive Attitude and Adaptability of University Graduates (AOUG)

Educators are confronted with the challenge of balancing the acute knowledge and skills that need to be taught while at the same time preparing students for the changing face of

media work and its systemic issues (Wrigley et al., 2021). More often than not, too much theoretical knowledge will leave graduates poorly prepared for the realities of life, whereas an overemphasis on practical skills may not make it possible to address systemic problems in a better way (Motlova & Honsova, 2021; Maskudi et al., 2024).

Career exploration through self-understanding and environmental awareness is significant for developing sound career plans and adjusting to job changes (Smith et al., 2020). Parental support plays an essential role in shaping graduates' ability to adjust themselves to workplace changes (Kim & Park, 2022; Suseno et al., 2024). That is why it is posited that a strong responsiveness attitude enhances the ability of graduates to adapt, which is essential for navigating a volatile and precarious labour market. Based on a thorough review of the literature, we can propose the following hypothesis:

H₄: The stronger the responsive attitude, the higher the adaptability of university graduates.

Learning Agility and Adaptability of University Graduates

Learning Agility (LA) is an individual's proficiency and ambition to acquire experience-based knowledge and use it effectively when confronted with novel situations. According to Lombardo and Eichinger (2000), LA stems from the ability and willingness to learn through experiences and the capacity to adapt to different situations. LA is when someone is very good at learning from the world around them and then applying that learning to new situations. Lombardo and Eichinger (2000) and Suseno (2019) tell us that LA brings together experience-based knowledge with the ability to learn from these experiences. It also allows for flexibility in various circumstances. This means these people can solve new problems by transferring knowledge, combining different things, and respecting different opinions. Studies show that you have Academic Self-Efficacy (ASE) affecting your academic motivation and engagement by means of Learning Agility (LA). Therefore, this hypothesis has been proposed:

H₅: The higher the learning agility, the higher the adaptability of university graduates.

Future Job Prediction Ability and High Adaptability of University Graduates

PFJ is important for students since it directs career planning and brings forth a matching of skills as well as interests. Accurate career forecasts enhance adaptability and life satisfaction for students and their parents (Haratsis et al., 2015; Mustofa et al., 2023). Career support provided by parents and students' skills in anticipating future jobs mediate the link between life satisfaction and readiness for work. Tokar and Kaut (2018) term self- and environmental explorations as two dimensions of career exploration. The former aids personal understanding, while the latter looks into jobs and organisations to unearth facts.

Typically, during adolescence and young adulthood, career exploration is vital in career development (Smith et al., 2020; Suseno & Mukhlis, 2023). Predicting labour market trends enables students to adapt more easily to fast-paced changes in the work environment. The following hypothesis was proposed following an extensive literature review:

H₆: The sharper the ability to predict future work, the higher the adaptability of university graduates.

Methodology

Design of the study

For this investigation, the researchers utilized a quantitative methodology based on a survey, following Creswell and Plano Clark (2011). The operational definition of variables is delineated as follows:

- Forecasting Future Employment Trends (FFET) Projected essential trends derived from integrated data, varied viewpoints, professional growth dynamics, personal profile comprehension, and digital literacy (Haratsis et al., 2015; Strielkowski et al., 2020; Park et al., 2022).
- Responsive Attitude (RA): The readiness and capacity to react suitably to circumstances and problems, represented by teamwork, critical thinking, pragmatism, responsiveness, and problem-solving skills (OECD, 2018; Wrigley et al., 2021; Schmid et al., 2022; Banwo, 2023).
- Learning Agility (LA): The ability to learn and adapt swiftly, demonstrated by academic motivation, environmental context, diversity comprehension, and value adoption (Lombardo).
- The adaptability of University Graduates (AOUG) is their capacity to adjust to diverse circumstances, which is demonstrated by their inventiveness, personal flexibility, task involvement, emotional intelligence, and accomplishment orientation (Ma et al. (2019), Chui et al. (2020), Öztemel and Akyol (2021), Parola and Marcionetti (2021), Badiozaman, 2023).

Population of the study

The research population comprised students involved in the Indonesian ICIL policy. Furthermore, of the 57,822 candidates, 16,250 students (Kemendikbud et al. 2024), geographically distributed across several islands such as Sumatra, Java, Sulawesi, Bali, and West Nusa Tenggara, representing Western, Central, and Eastern Indonesia, were chosen.

Sample size

The rationale for the sample size followed Hair et al. (2010), who advocated for a minimum of five times the amount of indicators. Nonetheless, with 19 indications, the minimum advisable sample size was 95 (5 x 19), guaranteeing consistent parameter estimates Kline, (2015).

Sample techniques

A purposive sample strategy was employed to identify participants who precisely matched the research population. A total of 293 students participated; however, after a rigorous screening process, only 284 replies were deemed suitable for the research. The replies surpassed the minimal sample size suggested by Hair et al. (2010) and, according to Kline (2015), ensured the stability of parameter estimates.

Instrument for data collection

- The trial test, a comprehensive process conducted from February to June 2024, was followed by the meticulous development of the survey questionnaire. This questionnaire was crafted by transforming indicators from each evaluated variable and was deemed valid and reliable after preliminary testing on a limited sample. The purposive sample technique exclusively targeted students who engaged in the ICIL program to complete the questionnaire using the Google Form link. The survey consisted of 19 multiple-choice questions designed with precision and care.
- Prediction of Future Employment (PFE) utilizing multiple-choice inquiries 1) Synthesizing information, 2) Varied perspectives, 3) Dynamics of professional development, 4)

Understanding individual profiles, and 5) Incentive for digital literacy training (Haratsis et al., 2015; Strielkowski, 2020; Park, 2022).

- Multiple-choice inquiries regarding a Responsive Attitude 1) Collaboration, 2) Critical thinking, 3) Realism, 4) Responsiveness, and 5) Problem-solving skills (OECD, 2018; Wrigley et al., 2021; Schmid et al., 2022; Banwo, 2023).
- Learning Agility (LA) consists of multiple-choice questions that assess 1) academic motivation, 2) environmental factors, 3) understanding of the variety, and 4) absorption of new values (Lombardo & Eichinger, 2000; De Meuse et al., 2010; Jian, 2022).
- Evaluating the adaptability of university graduates (AOUG) with multiple-choice questions 1) Innovation, 2) Individual adaptation capabilities, 3) Task involvement, 4) Emotional intelligence (EI), and 5) Achievement orientation (Ma et al. (2019), Chui et al. (2020), Öztemel and Akyol (2021), Parola and Marcionetti (2021), Badiozaman, 2023).

Structural Equation Modeling (SEM) and Confirmatory Factor Analysis (CFA) were chosen as the predominant data analysis techniques for their practicality and applicability. These methodologies allowed scholars to assess conceptual frameworks and measure constructs, making the research findings directly applicable to real-world scenarios.

Reliability of the instrument

Composite Reliability. Data exhibiting composite reliability greater than 0.7 demonstrates strong dependability. Cronbach's Alpha. Cronbach's Alpha enhances the robustness of reliability testing.

Validity of the instrument

- Convergent Validity The convergent validity value is the factor loading associated with the latent variable and its manifest counterpart. The anticipated value surpasses 0.7, Although researchers frequently employ a threshold of 0.6 as the minimal criterion for factor loading values.
- Discriminant Validity. This value represents the cross-loading factor, which is essential for assessing the construct's discriminant validity; specifically, the targeted construct's loading value must exceed the other constructs' loading values.
- Average Variance Extracted (AVE). The anticipated AVE value surpasses 0.5.

Method of data analysis

Primary data collected from respondents were analyzed using SmartPLS 4.0 software, which is well-suited for processing Structural Equation Modeling (SEM) data.

Result

Descriptive statistics

The study encompassed a diverse group of 284 respondents, with a slight majority being female (172 or 60.56%) and the rest male (112 or 39.44%). The participants represented a variety of academic programs, with the management program being the most prevalent (162 or 57.04%), followed by accounting (57 or 20.07%), business administration (24 or 8.45%), and public administration and Islamic communication broadcasting and information systems, each with a small but significant representation of approximately eight individuals, accounting for roughly 2.82%.

The youngest students were in semester 6, including 141 individuals or 49.65%, while the oldest was in semester 8, totaling 143 individuals or 50.35%. These students offered varied

perspectives throughout the educational stages. During the sixth semester, intermediate students articulated concepts on pivotal topics and culminating projects. Students in their eighth semester engaged with their education, drawing upon insights from previous seminars on final papers and theses and the maturity gained from their program learning.

ICIL comprises student exchanges (45.77%), village development (18.66%), internships (11.27%), and entrepreneurship (24.30%). This distribution indicates a preference for mentorship-enhanced education to foster communities and develop industry-relevant entrepreneurial skills.

Model Testing

This test assesses the validity of each association between the manifest and the construct or other variables. Researchers evaluate the convergent validity of the measuring model with a manifest reflection by analyzing the association between item or component scores and latent variable or construct scores computed by SmartPLS software. As depicted in Figure 1, there is a correlation between the two data sets.

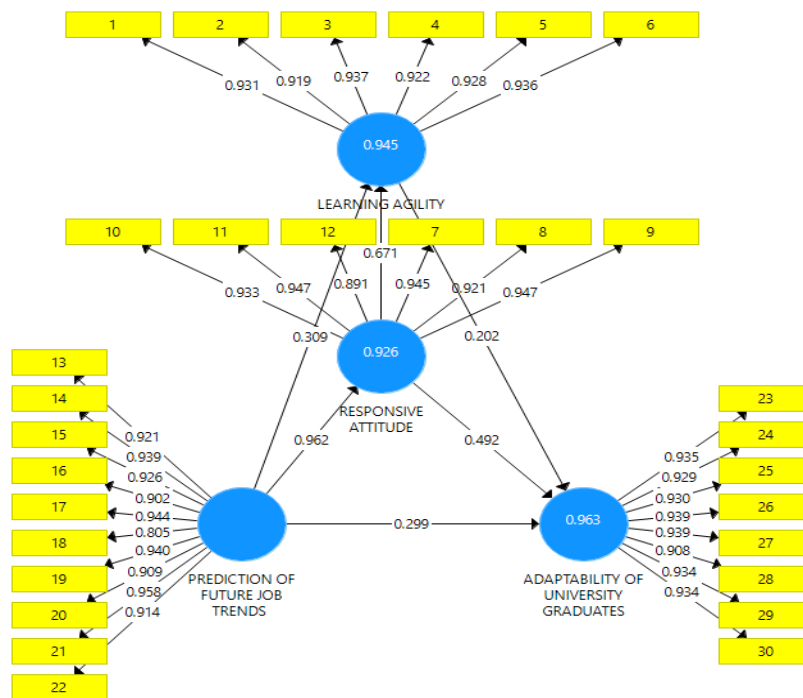


Figure 1. Output from Testing a Structural Equation Model by SmartPLS 4.0 (2024)

The results in Figure 1 indicate that the values generated by each variable are above the threshold of 0.7, signifying that the model is suitable for future testing.

Subsequently, table 1 presents the loading factor values for each manifest inside the variable.

Construct	Learning Agility	Responsive Attitude	Prediction of Future Job Trends	Adaptability of University Graduates
1	0,931			
2	0,919			
3	0,937			

4	0,922		
5	0,928		
6	0,936		
7		0,945	
8		0,921	
9		0,947	
10		0,933	
11		0,947	
12		0,891	
13			0,921
14			0,939
15			0,926
16			0,902
17			0,944
18			0,805
19			0,940
20			0,909
21			0,958
22			0,914
23			0,935
24			0,929
25			0,930
26			0,939
27			0,939
28			0,908
29			0,934
30			0,934

Sources: Outputl SmartPLS (2024)

The findings presented in Table 1 above indicate that each variable has satisfied the necessary criteria, with values over 0.7, which can be regarded as having passed the validity test between variables, permitting further testing.

R-Square Test

The R² value signifies the degree of determination of the exogenous variable in relation to its endogenous counterpart. A higher R² number signifies a superior degree of determination. A model is classified as strong with an R-square value of 0.75, moderate with an R-square value of 0.50, and weak with an R-square value of 0.25, which is visualised in Table 2.

Table 2. R-Square

	R Square	R Square Adjusted
Adaptability of University Graduates	0,963	0,962
Learning Agility	0,945	0,944
Responsive Attitude	0,926	0,925

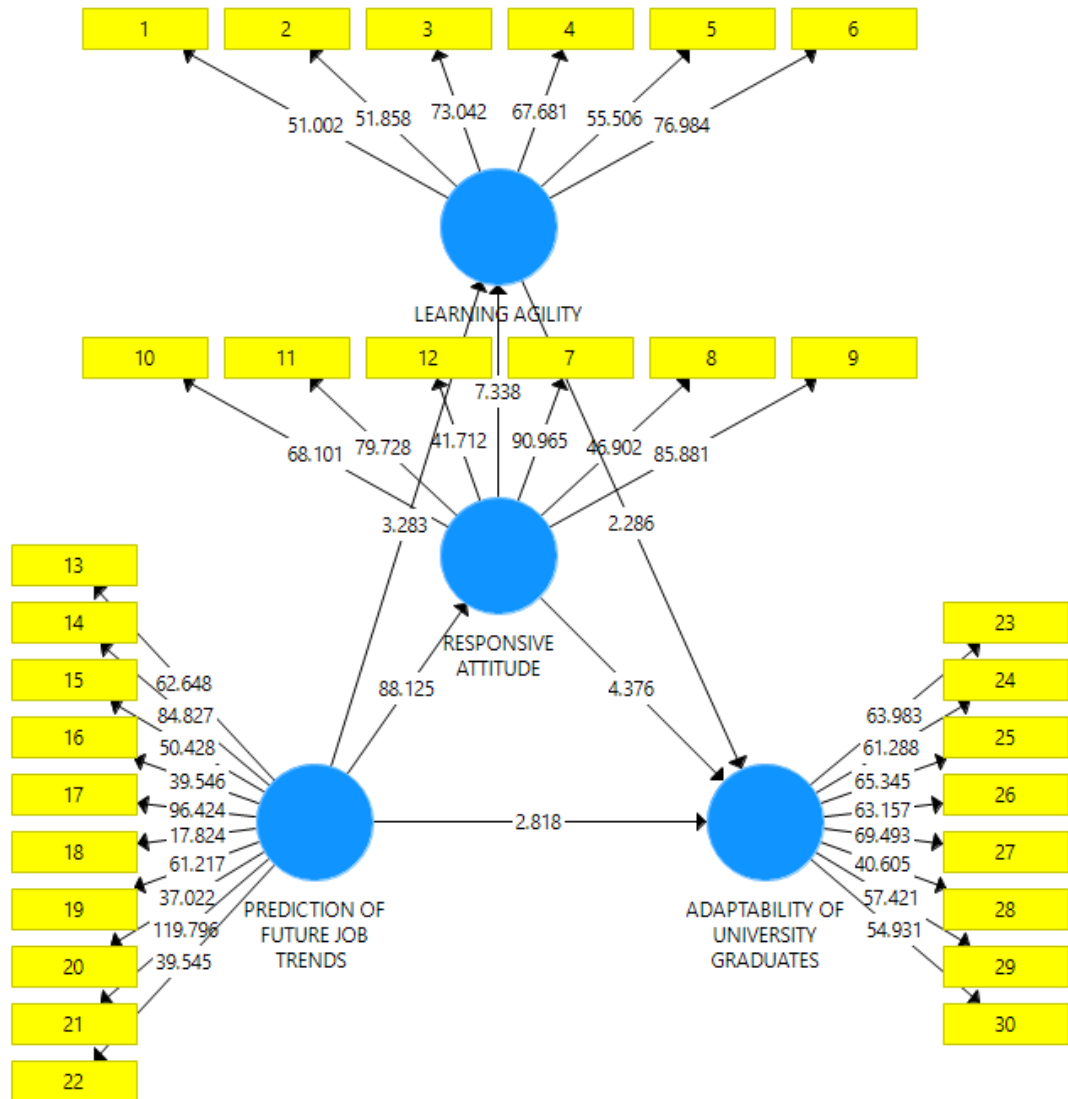
Sumber : Output SmartPLS (2024)

The test results presented in Table 2 indicate that the R-Square values for the adaptability of university graduates variable model is 0.963, for the learning agility variable is 0.945, and for the responsive attitude variable is 0.926, demonstrating a robust model for all three variables.

Bootstrapping Outcomes

Bootstrapping testing was used to ascertain the correlation between factors regarding data fit and data mismatch, as illustrated in Figure 2 below.

Figure 2. Bootstrapping



Sources: Output SmarPLS (2024)

The results depicted in Figure 2 indicate that the relationship between variables, understood as hypothesis tests, is presented in Table 3. The p-value determines the acceptance of this association; a value less than 0.05 indicates acceptance, but a value over the threshold established in smartPLS signifies rejection (not significant).

Tabel 3. Path Coefficient

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P-Values	Information
Learning Agility -> Adaptability of University Graduates	0,202	0,212	0,088	2,286	0,011	Significant
Prediction of Future Job Trends -> Adaptability of University Graduates	0,299	0,310	0,106	2,818	0,003	Significant
Prediction of Future Job Trends -> Learning Agility	0,309	0,299	0,094	3,283	0,001	Significant
Prediction of Future Job Trends -> Responsive Attitude	0,962	0,963	0,011	88,125	0,000	Significant
Responsive Attitude -> Adaptability of University Graduates	0,492	0,471	0,112	4,376	0,000	Significant
Responsive Attitude -> Learning Agility	0,671	0,681	0,091	7,338	0,000	Significant

Sources : Output SmarPLS (2024)

Following the bootstrapping method on the variable measurements, researchers can derive the following conclusions from the hypothesis testing results:

- H₁: The projection of prediction of future job trends influences responsive attitudes.**
 The path coefficient results indicate a strong positive correlation of 0.962 between predicting future job trends and responsive attitude. Additionally, the T statistic value of 88.125, with a P-value of $0.000 \leq 0.05$) supports the acceptance of hypothesis H1 regarding this relationship.
- H₂: Predicting future job trends influences learning agility.**
 The path coefficient results of 0.309 indicates a positive correlation between predicting future job trends and learning agility. Additionally, the T statistic value of 3.283, with a P-value of 0.001, suggests a significant influence of future job trend predictions on learning agility, leading to the acceptance of H2.
- H₃: A responsive attitude influences learning agility.**
 The results of the path coefficient obtained between responsive attitude and learning agility are 0.671, which means it has a positive value. In contrast, the T statistic value of 7.338 with a P-value of $0.000 < 0.05$ can be interpreted that there is a significant influence between responsive attitude and learning agility, then H3 is accepted.
- H₄: A responsive attitude influences the adaptability of university graduates.**
 The path coefficient between responsive attitude and adaptability of university graduates is 0.495,

indicating a positive relationship. The T statistic value is 4.376, and the P-value is 0.000, less than 0.05. This indicates a significant influence of a responsive attitude on the adaptability of university graduates, so H4 is accepted.

5. H₅: Learning agility influences the adaptability of university graduates.

The path coefficient of 0.202 indicates that learning agility positively influences the adaptability of university graduates. The T-statistic value of 2.286 and a P-value of 0.001, which is less than 0.05, demonstrate a significant relationship between learning agility and adaptability. So, H5 is accepted.

6. H₆: Predicting future job trends influences the adaptability of university graduates.

The path coefficient between the prediction of future job trends and the adaptability of university graduates is 0.299, indicating a positive relationship. Additionally, the T statistic value of 2.818 and a P-value of 0.003, which is less than 0.05, demonstrate a significant influence of predicting future job trends on the adaptability of university graduates. So, H6 is accepted.

Discussion

The first hypothesis states a positive correlation exists between the prediction of future job trends and responsive attitude. (Murphy (2021) bolsters this claim with data indicating that workers become more responsive when accurately predicting job trends. It was also observed that this dynamic was influenced by contextual factors such as the type of industry and economic uncertainty. De Meuse et al. (2010) conducted longitudinal studies demonstrating predictive analytics' role in helping employees respond better and adjust to changes.

According to the second hypothesis, greater learning agility is associated with more accurate job trend prediction skills; learning agility is the capacity for people to draw lessons from the past and apply those lessons to new situations. Predicting future job trends is unique in today's globalised and technologically advanced world. Furthermore, past research has demonstrated evidence of a very strong positive. In this context, capacity forecasting is emphasised. Those individuals who can precisely predict job trends will adapt better to market changes, predict the required skills, continue educating themselves throughout their lives, keep up with modifications in education sectors, and gain knowledge that will be of use in future careers (Smith et al., 2020; Munawir & Suseno, 2024).

The third hypothesis proposes a positive correlation between high learning agility and solid relational analytics. The statistical evidence indicating a positive link between a responsive attitude and learning agility validates this proposition. According to Gunzenhauser and Nückles (2020), learning agility can be described as an ability to quickly and smartly adapt to changes or situations. Even though the current study found a strong direct correlation between a responsive attitude and learning agility, raising a responsive attitude was essential for raising learning agility.

The Fourth Hypothesis argues that a robust, responsive attitude increases adaptability among universities, which is important for workplace success. This hypothesis was confirmed, meaning that a responsive attitude could increase the adaptability of up to 43 per cent in graduates. These results are consistent with theories such as De Meuse et al. (2010) that acknowledge the significance of both personal and organisational factors related to agility at work.

Hypothesis five suggests that graduates in a rapidly transforming labour market require adaptability, including problem-solving and acquiring knowledge (Lombardo & Eichinger, 2000; Suseno & Dwiatmadja, 2016). A significant link between learning ability and adaptability was found. Broad-based programs should be provided to foster learning ability.

The sixth hypothesis proposing a connection between adaptability and the capability of foretelling job trends was supported. A substantial correlation exists between forecasts of future employment trends and the adaptability of college graduates, indicating that a high capacity for adaptation to technological changes, work patterns, automation, and uncertainty enables students to remain pertinent to emerging job trends. According to Haratsis et al. (2015) and Maskudi et al. (2024), graduate adaptability is influenced more by cognitive flexibility, resilience, and social skills than by predicting future job markets.

Conclusion

Predicting job trends and responsiveness are linked. Economic uncertainty and industry type alter these dynamics—predictive analytics aid employee change. Job trend prediction improves with learning agility. Today's technologically advanced culture rarely predicts job trends worldwide. Previous studies have demonstrated significant benefits. The focus is on capacity predictions. Job trend predictors can better react to market changes, predict required abilities, continue to educate themselves, stay up with education sector developments, and learn for future careers.

Relational analytics improves learning agility. Statistics suggest a link between responsiveness and learning agility. Despite a strong correlation between responsiveness and learning agility, increasing responsiveness is essential to promote learning agility. That good responsiveness promotes collegiate adaptability, which is crucial for employment success. College graduates' adaptability improves with the response, proving the notion. Young people in a fast-changing job environment need problem-solving and knowledge-acquisition skills. Learning capacity strongly influences adaptation. Learning should improve with broad programs. We support the sixth hypothesis connecting adaptation to job trend forecasts. The projections say college graduates' adaptability to technology, work patterns, automation, and unpredictability keeps them relevant to job trends. Cognitive flexibility, resilience, and social skills better predict graduates' adaptation than job market projections.

The current study faced several limitations, as the researchers restricted the sample to undergraduates involved in the ICIL program. Consequently, the findings needed to be more consistent with the broader graduate community. This research employed a cross-sectional methodology, evaluating variables at a singular moment, neglecting to account for fluctuations or developments in graduates' adaptability over time.

Moreover, mediating factors such as technology, organizational culture, and training were mentioned solely in a conceptual context and not subjected to empirical analysis, leading to a deficient comprehension of their particular mediating roles.

Future studies need to expand the sample to include graduates from diverse programs and institutions, improving the findings' generalizability. Longitudinal evaluations are also required to evaluate the progression of graduates' adaptation over time. Furthermore, further research should investigate the impact of mediating factors such as technology, organizational culture, and training in greater depth to improve the comprehension of the relationship among PFJ, RA, LA, and adaptability. Future evaluations should examine effective educational and training methodologies to enhance responsiveness and learning agility in graduates.

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