

THE EFFECT OF LEARNING AGILITY AND EMPLOYEE ENGAGEMENT ON EMPLOYEE PERFORMANCE WITH ADAPTABILITY AS A MEDIATOR

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Abstract

This study was designed to investigate the impact of learning agility and employee engagement on employee performance, with adaptability serving as a mediator. The research employed a quantitative, explanatory design involving 99 employees from the telecommunications and technology-based communication services sectors in Indonesia. Data were collected via a questionnaire using a 1–5 Likert scale and analyzed using Structural Equation Modeling - Partial Least Squares (SEM-PLS) with the assistance of SmartPLS 4. The findings indicate that learning agility has a positive and significant impact on adaptability, while adaptability also has a positive and significant effect on employee performance. Learning agility and employee engagement do not show a significant direct impact on employee performance. Employee engagement also does not have a significant impact on adaptability. Mediation tests show that adaptability fully mediates the effect of learning agility on employee performance, but does not mediate the effect of employee engagement on employee performance. These results emphasize that employees' learning abilities will be more effective in improving performance when optimized by the ability to adapt to changes in work, technology, and the organizational environment.

1. INTRODUCTION

In the face of a growing, changing and uncertain business environment, organisations need to have staff who not only are skilful, but also flexible and adaptive with change. Individual contribution to an organisation is now a key ingredient to the success or failure of organisations in this context. In today's organizations it is necessary to have an adaptable workforce and learning agility to adapt in the rapidly changing and uncertain business environment (Teece, 2021). In addition, the company's performance depends on the performance of its employees, which is crucial for its effectiveness and success in achieving the company's business objectives (Armstrong & Taylor, 2023).

Learning agility is another key element that drives employee performance and is considered an individual's ability to learn from experiences and transfer this knowledge into new situations (De Meuse, 2022). Those who show high learning agility tend to be more adaptive to change, bring more innovative solutions to their work, and improve their performance in their jobs. But high levels of learning do not necessarily equal high levels of in-work achievement. When it comes to learning, many people with great potential may not be able to function optimally. This means that the ability to learn alone is insufficient to allow for direct gains in performance, but other influences are also important in determining the outcomes of work (Noe et al., 2021).

Employee engagement, in addition to learning agility, is considered to be one of the most crucial components that facilitate improved job performance. Employee engagement is defined as the emotional connection employees feel toward their job and employers, and their commitment and enthusiasm toward their jobs (Bakker & Demerouti,

2022). High engagement is associated with higher productivity, increased loyalty and a greater desire of employees to put effort toward reaching organizational goals.

But, lots of involvement does not predict great outcomes. Many employees feel a positive attitude and excitement about their role within the workplace, but the amount of work they are producing is not at the level of the workplace. This scenario clearly indicates that there is a puzzle that is engagement and performance and that there might be a lot more going on than engagement.

However, a similar phenomenon is seen with employees who are learning agile. These people tend to learn from experience and adapt easily when learning new things, but these skills don't always correlate with good work. One factor that has often been thought to be important in this context is adaptability. Adaptability is a personality characteristic or a behaviour students exhibit to adjust to the changing work environment, changing job demands, and technological advances. With the continuation of the organizations working in more and more dynamic situations, it has become one of the most important skills in the job market. Employees who can manage to adapt to change are more likely to maintain or improve their performance levels in the face of new challenges and uncertainties (Kim & Park, 2023).

A theoretical perspective has learning agility and employee engagement as important variables that may directly influence employee performance, either as mediators through adaptability. However, the empirical findings are unclear and *ex post* inconclusive. A few studies have found that learning agility can have a positive impact on performance, as those who are able to learn from their experiences and transfer their learning to new settings have better performance outcomes (De Meuse, 2022). Others, however, suggest that this may not be enough; they argue that learning agility has to be coupled with behaviours of adaptation, thus empowering individuals to react and respond positively to change in the workplace (Noe et al., 2021). Such inconsistencies have been found in studies concerning employee engagement. While some of these have been positive in terms of engagement and its impact on performance, others suggest that engagement is not always directly linked to better performance and that, in addition to engagement, other factors may also be needed, such as adaptable behaviour, innovative work behaviour, or motivation, to achieve positive performance (Bakker & Demerouti, 2022).

The mixed results suggest that the associations between learning agility, employee engagement and employee performance are not well established. Specifically, few studies have examined the possible mediating role of adaptability between learning agility and employee engagement and how these are linked to increased performance. Previous studies have mainly looked at the direct links between these variables and have tended to study them separately. Therefore, little is known about how to transform employee abilities and psychological resources into increased performance.

This gap is particularly relevant in the telecommunications and technology based communication services in Indonesia. In recent years, the delivery of high quality video streaming has been revolutionized by the rapid evolution of digital infrastructure, cloud computing, artificial intelligence, and ever evolving customer viewing expectations. The changes mean workers will need to continually maintain their knowledge, adjust to new technology and react rapidly to market changes. Organizations have put considerable resources into their digital transformation projects and technological advancements, but sustaining employee performance during an organization's change is difficult. In this context, adaptability has become a key skill that helps workers deal with technological upheavals and changing job requirements.

Several complementary theoretical viewpoints can be used to explain the relationships studied in this research. The dynamic capability theory has suggested that learning and adaptive ability will make individuals and organisations respond well with changes in their environment and remain competitive (Teece, 2021). Meanwhile, Job Demands Resources (JD-R) Theory indicates that employee engagement is a crucial psychological resource that can motivate workers and help create positive work outcomes (Bakker & Demerouti, 2022). Social Exchange Theory also suggests that when people feel the connections with their organization are positive and rewarding, they're more likely to respond by being committed and contributing. As a whole, these theoretical views suggest that adaptability can be a critical mechanism in the relation between employee abilities and psychological resources and performance outcomes.

In view of that, this study is designed to explore how learning agility and employee engagement is related to employee performance through adaptability as the mediator. This study aims to deepen the understanding of the contribution of learning capabilities and employee engagement to organizational success and performance improvement within the telecommunications and technology-based communication services industry in Indonesia, especially in today's dynamic digital landscape.

2. LITERATURE REVIEW

Understanding the connections among key variables explored in this study is founded on the literature review. It builds on the prior literature by summarizing the literature and beyond that, highlighting gaps that need further study and helping to formulate the proposed hypotheses. The literature review should not just summarize what has

been studied before, as suggested by Hair et al. (2022), It should try and critically appraise the existing body of knowledge, that will help to present the relevance and need of the research framework being proposed. In the research area of organizational behavior and human resource management, learning agility, employee engagement, adaptability, and employee performance have become a subject of increasing research. Part of this is because more and more workers are needed to be agile, resilient and productive in today's fast evolving business landscape. While previous research has focused separately on these constructs, few studies have attempted to combine them into a single model. Specifically, how learning agility is associated with employee engagement and ultimately employee performance through adaptability is under-researched. Hence, this study aims to fill the gap in the literature in this regard and provides a better understanding of how employees' learning capabilities and work engagement can influence their performance outcomes by developing adaptive capabilities.

2.1 Theoretical and Conceptual Background

Theories are needed to explain the interaction between learning agility, employee engagement, adaptability and employee's performance in this research, which are relevant theories. The Dynamic Capabilities Theory is one of the main theories used, which suggests that both individuals and organisations must also be able to learn, adapt and modify the existing skills to remain in survive in a constantly evolving environment. Strategic capabilities include the ability to learn and adapt: individual and organizations can adapt to environmental changes and remain competitive in the long term (Teece, 2021).

Besides, the Job Demands-Resources (JD-R) Theory is also utilized in this study that suggests that employee engagement is a psychological resource which could help in enhancing the positive work behavior, motivation and dedication of employees. Greatly engaged employees generally are more enthusiastic, committed and involved in their work (Bakker & Demerouti, 2022). The Social Exchange Theory is used to view that returns and reciprocity of the interaction between individuals and the organization will compel the employees to give more to the organization. Valuing employees, supporting them and encouraging them to belong to the organization typically results in more positive employee behaviours at work.

Based on these three theoretical perspectives, this study argues that learning agility and employee engagement have the potential to enhance employee performance, both directly and through adaptability. Adaptability is considered as one central process that determines how capacities to learn and work engagement can be transferred to increased performance. Hence, adaptability is employed as an intervening variable linking the learning agility-employee engagement employee performance relationship.

2.1.1 Learning Agility

Learning agility is the extent to which the individual is able and willing to learn from a previous experience, what they have learned from past events and how they can apply the knowledge in a new and different situation. Learning agility is another skill that is essential in today's workplace since it is an environment that is marked by digital technological developments, instability and requires continuous learning. High learning agility individuals don't just absorb new concepts quickly, but they are reflective, open to criticism, and can apply their new learning in the various work situations (Das, 2024).

There are four key components of learning agility interpersonal agility, outcome agility, mental agility, and change agility according to a popular model of recent studies. It was also based on the adaptation of the Indonesian version of the learning agility measurement instrument in 2022 which showed that these four components are empirically validated (Wibowo, 2023).

2.1.2 Employee Engagement

Employee engagement is a positive psychological disposition of employees, showing enthusiasm, participation and commitment to their job. In recent studies, the concept of engagement is understood as one that is affective, energetic, and motivational, showing that engaged employees are enthusiastic about their work, committed to their work, and involved in their day to day activities (Bakker & Demerouti, 2022). So the concept of engagement is not the same as the typical idea of a happy and satisfied employee; engagement means that the employee is really "wholeheartedly" mentally gearing up to do the job.

In general, the most influential and popular components that characterize employee engagement are vigor, dedication, and absorption (Bakker & Demerouti, 2022). Although there are some studies in Indonesia that involve the aspect of contribution, these three main aspects are still the most reliable ones to use at the international level and for quantitative research models

2.1.3 Employee Performance

Employee performance is the work results that employees display while performing their tasks, responsibilities and behaviours that enable the organisation to achieve its goals (Armstrong & Taylor, 2023). Recent studies have broadened the concept of understanding by defining it in a multiple dimension fashion: how core work is done, how support is given for the social organizational situation, how adaptation to changes is worked out, and how prevention of harmful (social) behavior is achieved. Thus, the performance of the employees is a reflection of their work output and work behaviour contributing to their effectiveness in the organisation.

Employee performance refers to how well an employee is able to perform his/her role or function and make a contribution to the organisation goals and objectives with competent work behaviour and attainment of desired results (Armstrong & Taylor, 2023). Employee performance, in the current human resource management research can be understood as a multi dimensional phenomenon involving several aspects of job accomplishment. However, in the present study, adaptability is located as a separate mediating variable, therefore the concepts of employee performance and adaptability should be clearly distinguished to avoid conceptual overlap and redundant behaviors among constructs.

As such, the performance of employees within the scope of this research is defined and evaluated in terms of job performance indicators indicative of the main outputs of the job and not of the adaptive skills. The construct is assessed across a variety of dimensions such as the quality of work, quantity of work, timeliness of work completion, effectiveness and efficiency in job responsibilities, and independence in working. These scales are designed to reflect actual accomplishments and performance of the individual, rather than adaptability. This is consistent with the recommendation of Hair et al. (2022), who emphasize the need to ensure the discriminant validity between latent variables in the application of SEM techniques.

the purposes of human resource management studies, performance indicators can be operationalized through the following aspects where the aspect of 'adaptability' can be used as a link.

- a. Work quality. Work quality is defined as the degree to which work performed by staff is accurate, precise, consistent and excellent. There should be employees that have good work quality who are able to perform tasks with the established standards, which have low error and provide reliable results in accordance with the organizational expectations (Dessler, 2020).
- b. Work quantity. Work quantity is a measure of what workers can produce in a given time frame. This dimension shows an employee's ability to meet performance standards, control workloads and maintain a proper productivity level over time (Noe et al., 2021).
- c. Timeliness. Timeliness is about an individual's capacity to work to schedules and deadlines, and prioritize work well. It is an indicator of the effectiveness of a person's ability to arrange their tasks to get things done on time (Armstrong & Taylor, 2023).
- d. Effectiveness and efficiency of tasks. The effectiveness of a task is a measure of how well work objectives or expected outcomes are met. Efficiency, on the other hand, refers to the use of available resources, as time, effort and organizational support, in task execution. These dimensions collectively contribute to understanding a job's overall success in terms of job performance (Hair et al., 2022).
- e. Work Independence. Work independence is defined as an employee's capacity to perform tasks and make decisions about work, with little direct supervision. Those who have a high level of independence at work are able to work independently and be accountable for their own work (Robbins & Judge, 2021).

2.1.4 Adaptability

Adaptability is the ability to adjust to changes in the workplace, such as new technology, changing roles and unexpected situations. Adaptability is about behavioral flexibility and adapting to new circumstances/people that will facilitate performance and functioning in a changing environment, while employee performance is about results/outcomes of work behaviors (Pulakos et al., 2021).

Adaptability in this study is considered a dynamic capability that provides a link between learning agility and employee engagement with improved performances. That is, the better an employee can adjust to changes, the more likely she is to use her learning capacity and job motivation to make a real difference. To capture this construct, the following elements are included in the assessment of adaptability: responds to uncertainty, reacts well in emergency situations, can come up with creative solutions to problems, manage stress at work, can learn and apply new technologies/processes, can adapt to different situations with different people, can adapt to culturally different environments, and can work effectively under different conditions. This study aims to differentiate adaptability from employee performance in order to better understand the processes that link employee and their capabilities and psychological resources to the betterment of organizational outcomes. They are 8 indicators which are described as follows.

- a. Ability to cope with uncertain and unpredictable work situations
This aspect displays the person's ability to be effective when faced by unexpected events, lack of information, or uncertainty in work situations. Adaptable employees are able to adapt rapidly to new situations, stay focused on their work and goals (Pulakos et al., 2021).
- b. The ability to handle emergencies or crises
Adaptability has also been illustrated by individual's capacity to respond appropriately in case of emergency problems, disturbances in operations or crisis situations. Those who have this ability can stay calm while making the right decisions and taking appropriate action under difficult circumstances (Kim & Park, 2023).
- c. Ability to solve problems in innovative ways

An adaptable employee isn't merely one who just adjusts to change: they are one who takes up new ways of looking at things and finding new solutions to new issues. Another important component of adaptive behavior is the ability to think outside the box and find different solutions to overcome problems (Teece, 2021).

- d. Ability to manage workplace stress
Work effectiveness under pressure, staying focused, and emotional stability during the crisis are also signs of adaptability (Bakker & Demerouti, 2022).
- e. The ability to learn new tasks, technologies, and procedures
With the times of constant digital transformation, one aspect that is becoming more crucial is the capacity to learn new things and acquire new skills. An adaptable individual must be willing and able to easily learn and use new technologies, systems, procedures and ways of working (Noe et al., 2021).
- f. Interpersonal adaptability
Adaptability is not just about what one is doing or not doing but changing one's approach in socializing. Interpersonal adaptability is about a person's abilities to adjust their communication style, interpersonal relationships, and social interaction with others from varied backgrounds and attitudes (Robbins & Judge, 2021).
- g. Ability to adapt in culturally diverse environments
In an increasingly diverse world, organizations demand that employees be able to effectively work with people of varying cultural backgrounds. This dimension denotes the knowledge, acceptance and adaptation to cultural differences in values, norms, customs and work practices in multicultural contexts (Sutrisno et al., 2022).
- h. Ability to adapt to the physical demands of the job
Adaptability in some jobs includes the ability to adjust to physical demands that change. This can involve changing work situations, work timetables or work loads. While this aspect may not be as significant for every sector, it is still a crucial element in a holistic adaptability plan.

2.2 Empirical Review and Hypothesis

The several previous studies that are relevant to the learning agility variables, employee engagement, adaptability, and employee performance showed that all these variables have significant relationship directly and indirectly Aprilia and Hidayat (2024), carried out a study that showed that learning agility positively and significantly affected employee performance (Aprilia & Hidayat, 2024).

Moreover, it has been established that learning agility can be the direct impact on performance and indirectly through the variable of organizational commitment (Fauziah et al., 2024). According to a study completed by Nurmaseli (2026) with a meta-analysis approach, learning agility is one of the important factors that improves the engagement and adaptability of employees (Nurmaseli, 2026).

Putri et al. (2023) on the other hand, shows that there is a positive and significant relationship between employee engagement and employee performance (Putri et al., 2023). A study by Sari and Dewi (2022) found that another factor that positively influences employee performance is adaptability (Sari & Dewi, 2022). Furthermore, Rahman (2021) it has been stated that, the employee engagement will improve the productive aspect and employee performance as it will increase the work motivation and commitment of the employees with the organization (Rahman, 2021).

Table 2.1 Summary of Research Hypothesis

No	Hypothesis	Statement
1	H1: Learning Agility → Employee Performance	Learning agility has a positive impact on employee performance.
2	H2: Employee Engagement → Employee Performance	Employee engagement has a positive impact on employee performance.
3	H3: Learning Agility → Adaptability	Learning agility positively contributes to adaptability.
4	H4: Employee Engagement → Adaptability	Employee engagement positively contributes to adaptability.
5	H5: Adaptability → Employee Performance	Adaptability has a positive impact on employee performance.
6	H6: Learning Agility → Adaptability → Employee Performance	Adaptability mediates the relationship between learning agility and employee performance.
7	H7: Employee Engagement → Adaptability → Employee Performance	Adaptability mediates the relationship between employee engagement and employee performance.

Source: Authors (2026)

3. RESEARCH METHODOLOGY

This study used quantitative research design with the explanatory approach to analyze the direct and indirect association among learning agility, employee engagement, adaptability and employee performance. An explanatory

approach was deemed suitable as the study aims to explain the causal relationships between latent variables, and thus test hypotheses that were developed from existing theoretical frameworks (Creswell & Creswell, 2023).

The type of research used is explanatory research, explanation is a type of research that aims to explain about the cause and effect of the independent variable and the dependent variable in this research is the mediating variable. The purpose of this study is to examine the relationships between learning agility, employee engagement and employee performance with adaptability as the mediator (Hair et al., 2022). explanatory research is conducted to explain the causality pattern of the variables in the research model and to obtain the empirical conclusions in studying the direct and indirect relationships between the variables studied

The type of research conducted was causal research due to the explanation of the relationship between variables in the research model. In this study, learning agility (X1) and employee engagement (X2) are independent variables and adaptability (Z) is a mediating variable and employee performance (Y) is a dependent variable. This relationship model is applied to pinpoint the direct and indirect links between learning agility, employee engagement and employee performance in the context of adaptability to change (Teece, 2021).

The method of data analysis in this study is the approach of Structural Equation Modeling Partial Least Squares (SEM-PLS). This study used the SEM-PLS approach, owing to the complex relationship in the model and the use of a mediator to be analyzed. (Sarstedt et al., 2021a) state that SEM-PLS is very useful for exploratory and predictive research, especially for management and organizational behavior studies, which include mediation effects between latent constructs.

The data was analyzed in this study with the help of SmartPLS version 4 software. The use of SmartPLS aimed to evaluate the validity and reliability of the instruments, examine the structural model and explore the direct and indirect relationships between the variables studied (Henseler et al., 2021).

The population analyzed in this study consists of all employees working in the telecommunications sector and in jobs related to communication services in Indonesia. This population comprises employees from various divisions and job levels who are actively working in an ever changing, technology driven organizational environment. The selection of this population is based on the fact that the telecommunications sector is experiencing a very rapid pace of change in organization, technology, and work systems, thus requiring high levels of learning agility and adaptability from employees (Teece, 2021). Additionally, this industry also demands intensive work participation to maintain organizational performance amidst business changes.

The respondents in this study were 99 respondents who were selected using an online questionnaire distribution via Google Forms. The respondents were employees working in the telecommunications industry or in jobs related to technology based communication services. The questionnaire was constructed based on the indicators used in the operation of the variables. The questions were carefully designed to ensure their easy understanding by the respondents. Data collection in this study uses a 5 point Likert Scale.

Data collection techniques in this study were developed to get the data and information that was correct, suitable and relevant to the objectives of the study in the context of the influence of learning agility and employee engagement on the performance of employees using the mediator of adaptability. Data collection methods used in this research were questionnaires, documentation and literature study.

The instruments used in this study were the adaptation of existing instruments which have been proven to be valid and reliable in previous studies. The four dimensions of learning agility were measured according to De Meuse (2022), Mental Agility, People Agility, Change Agility and Results Agility. Employee engagement was assessed using the dimensions of vigore, dedication, and absorption put forward by Bakker and Demerouti (2022). Adaptability was evaluated using indicators derived from the adaptive performance framework developed by Pulakos et al. (2021). Meanwhile, employee performance was measured through dimensions related to work quality, work quantity, timeliness, effectiveness, and work independence, adapted from Armstrong and Taylor (2023).

All indicators were carefully considered and assessed for meeting recommended validity criteria as part of the measurement model assessment. It was found that two of the indicators failed to fall within the desired limit and had to be excluded from the model. These comprised one of the indicators measuring the employee engagement construct (X2.6) and one of the indicators measuring the adaptability construct (Z.3). Following the removal process, the constructs all exhibited acceptable convergent validity, composite reliability and average variance extracted (AVE). These findings indicated that the measurement model had acceptable psychometric properties and it could be used for subsequent structural model analysis.

The participants came from various telecommunication, information technology, digital service and other communication related industries. This respondent profile is in line with the research goals, because these industries have environments with a lot of technological changes and constant changes in the organization. In this environment, learning agility, employee engagement and adaptability are emerging as key skills that can help achieve sustained employee performance.

It was noted that common method bias (CMB) was a potential problem in this study because all of the study variables were assessed through self reported questionnaires. To reduce this risk, several procedural steps were taken

such as assuring the respondent of anonymity, assuring voluntary participation, and informing the respondent that there were no correct or incorrect answers. These measures were designed to minimise evaluation apprehension and social desirability tendencies when completing the questionnaires. Additionally, Harman's Single Factor Test was performed as a statistical evaluation for a possible method bias. The results showed that the first factor explained less than 50% of the variance and this suggests that common method bias was probably not a serious concern for the validity of the study results.

4. RESULT AND DISCUSSION

4.1 Result

Respondent profiles are an important component of quantitative research because they give information on the nature of the respondents who supply the data. Moreover, demographic information of the respondents can be utilized to describe the relationship between the results of the study and characteristics of the population studied. This study obtained 99 subjects, all of which were telecom employees and related. Respondent characteristics captured includes gender, age and highest education level. The purpose of respondent profile is to give an overall picture of the profile of the respondents with whom this study has been conducted.

Table 4.1 Respondent Profile by Gender, Age, and Education Level

Gender	Number	Percentage	Age	Number	Percentage	Education	Number	Percentage
Male	60	60,6 %	20-30	63	63,6 %	High School	2	2,0 %
Female	39	39,4 %	31-40	25	25,3 %	Diploma	9	9,1 %
Total	99	100 %	>40	11	11,1 %	Bachelor's	81	81,8 %
			Total	99	100 %	Graduate	7	7,1 %
						Total	99	100 %

Source: Authors (2026)

Table 4.1 shows that the majority of participants in this study were men, numbering 60 or 60.6%, while women numbered 39 or 39.4%. These findings indicate that male respondents still dominate the technology and telecommunications sectors. It can be seen that the majority of participants were between 20 and 30 years old, totaling 63 individuals, which accounted for 63.6% of the total. Furthermore, there were 25 participants aged 31 to 40, representing 25.3%, and 11 individuals over the age of 40, accounting for 11.1%. These findings indicate that the majority of participants fall within the productive age group. This group is typically better able to adapt to technological changes and a rapidly evolving work environment. Most of the participants had completed a bachelor's degree (S1), totaling 81 participants, or approximately 81.8%. Furthermore, there were 9 participants with a diploma, accounting for 9.1%; 7 participants with a master's degree, totaling 7 or 7.1%; and 2 participants at the high school/vocational school level, representing 2.0%. The dominant presence of respondents with a bachelor's degree indicates that the majority of participants have a relatively high level of education.

Descriptive statistics was used to analyze the variables of learning agility (X1), employee engagement (X2), adaptability (Z) and employee performance (Y) in this study. Using Likert measurement scale, the 1-5 scale indicates

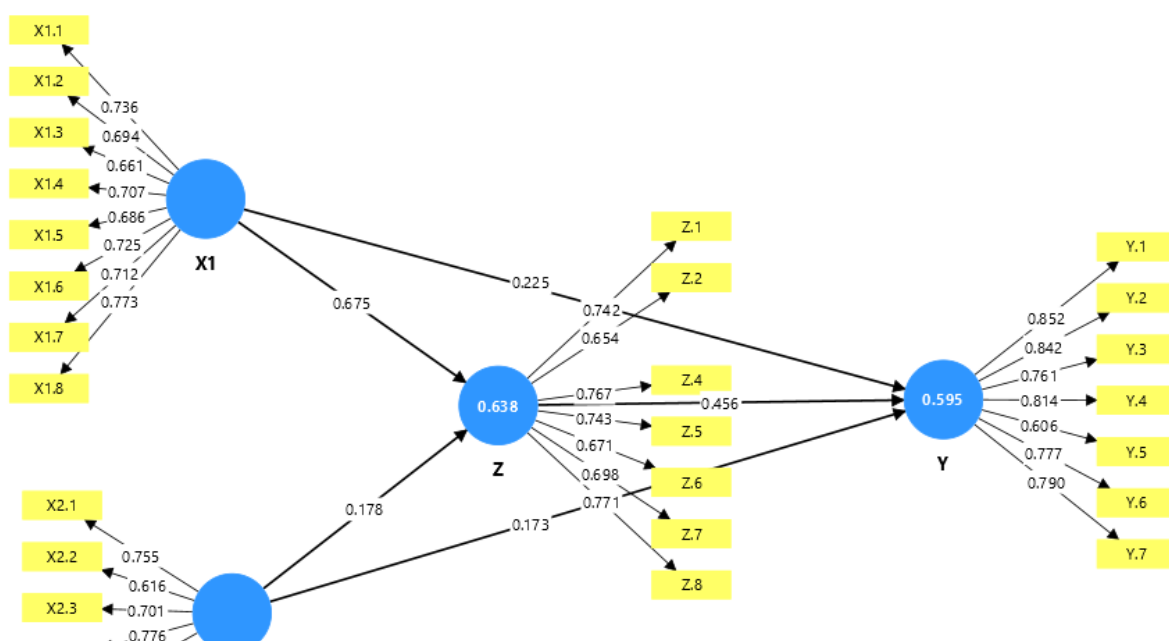


Figure 4. 1 Outer Loading Evaluation

Source: Authors (2026)

that respondents' perception of the scale is more positive as the numbers approaching 5. The outer loading values for the indicators in each variable mostly fell in the "good" category, as determined by SmartPLS analysis. Higher outer loading values imply that the indicators used are good representations of the constructs being measured (Hair et al., 2022).

The measurement of the learning agility variable is based on 8 indicators namely X1.1 - X1.8. The outer loadings of all indicators in the learning agility variable are greater than 0.60 (see Figure 4.1). The point that has the highest value is X1.8 (0.773), and the point that has the lowest value is X1.3 (0.661). These findings suggests that the learning agility indicators can explain the variable under study. In line with Sarstedt et al. (2021), factor loadings above 0.60 are still acceptable, especially in the context of social and management research, exploratory studies and development of organizational behavior models (Sarstedt et al., 2021). Results indicated on the whole, that the respondents have a reasonably good capacity on learning agility in the face of changes in the working environment.

After discarding the indicators that did not meet the validity criteria, the employee engagement variable was operationalized by five indicators. The external loadings of the employee engagement indicators varies from 0.616 to 0.788 as illustrated in Figure 4.1. The largest value is X2.5 indicator with value of 0.788, and the smallest value is X2.2 indicator with value of 0.616. Some factor loadings of the indicators are near the minimum value but they satisfy the convergent validity criterion and have satisfactory Average Variance Extracted (AVE) values and should therefore be retained. Hair et al. (2022) claim that indicators with values >0.60 may be used as long as reliabilities and AVE values are satisfactory (Hair et al., 2022). The results of this study show that overall, employees' commitment represents a relatively high level of employee engagement, especially in terms of dedication and commitment to work.

The adaptability variable was measured using seven indicators after one indicator was eliminated for failing to meet validity criteria. As shown in Figure 4.1, the outer loadings for the adaptability variable range from 0.654 to 0.771. Indicator Z8 recorded the highest value of 0.771, while the lowest value was found in indicator Z2, which reached 0.654. These figures indicate that the adaptability indicators effectively reflect employees' ability to adapt to changes within both the organization and the work environment. A reference from Ringle et al. (2021) states that indicators with loading values above 0.60 may be retained if the overall research model meets the standards of construct validity and reliability (Henseler et al., 2021). These findings suggest that the majority of respondents possess a sufficiently high level of adaptability when facing changes in technology, work systems, and organizational developments.

Seven indicators were used for the employee performance variable. As illustrated in Figure 4.1, the outer loading for all of the employee performance indicators is greater than 0.60. Indicator Y1 had the highest value (0.852) and indicator Y5 had the lowest value (0.606). In general the values of the loadings for the employee performance variable reveal very satisfactory performances. As proposed by Hair et al. (2022), values of the indicators that are close to or higher than 0.70 indicate that the indicators can explain the research variable construct fairly well (Hair et al., 2022). The result of the analysis shows that the respondents are able to produce good performance with aspects of work quality, effectiveness and ability to complete the task.

From the results of the SmartPLS analysis, it was found that all the research indicators had outer loadings above 0.60 with 2 indicators that were not found to be valid being X2.6 and Z3. So all indicators were found valid and were used for further analysis. Furthermore, the AVE value was used to measure convergent validity. The suggested good AVE value is greater than 0.50, which means that the construct explains more than 50% in its indicators (Hair et al., 2022). As can be seen from Table 4.2, the AVEs of all of the variables were greater than 0.50. Therefore it is considered that all research constructs are valid convergently.

Table 4.2 Construct Reability and Validity

Variable	Cronbach Alpha	Composite Reliability (rho a)	Composite Reliability (rho c)	Average Variance Extracted (AVE)
Learning Agility (X1)	0,861	0,865	0,892	0,507
Employee Engagement (X2)	0,782	0,800	0,850	0,533
Adaptability (Z)	0,892	0,904	0,916	0,610
Employee Performance (Y)	0,846	0,848	0,884	0,522

Source: Authors (2026)

Reliability testing aimed to consider to what degree the constructs in this study can be measurably and consistently tracked by the indicators. The reliability of the SEM-PLS analysis was done using Cronbach's Alpha and Composite Reliability. A Cronbach's alpha value, as well as the Composite Reliability value greater than 0.7 is deemed as reliable according (Hair et al., 2022).

As shown in Table 4.2, the Cronbach's Alpha and Composite Reliability values of all variables are above 0.70. Thus, all the constructs in this study are reliable and showed good internal consistency. This result shows that the instruments in this study are able to consistently measure the variables of learning agility, employee engagement,

adaptability and employee performance. According to Henseler et al. (2021) a high reliability reflects that the indicators of a construct in research based on SEM-PLS have the measurement stability and measurement consistency (Henseler et al., 2021).

From the evaluation of outer loadings it can be stated that all of the variables in this study have been fulfilled with the requirements of validity and reliability. All the outer loadings of indicators exceed the cut off value of 0.50, and the Cronbach's Alpha and Composite Reliability values are greater than 0.70. So, this study found that the measurement model is appropriate

Table 4.3 Discriminant Validity

Variable	Learning Agility (X1)	Employee Engagement (X2)	Employee Performance (Y)	Adaptability (Z)
Learning Agility (X1)				
Employee Engagement (X2)	0,767			
Employee Performance (Y)	0,772	0,677		
Adaptability (Z)	0,911	0,732	0,841	

Source: Authors (2026)

Heterotrait-Monotrait Ratio (HTMT) was used for the assessment of discriminant validity as well. When the HTMT is below 0.9, this constitutes as evidence that the constructs are not too similar (Henseler et al., 2021). It was found that each of the HTMT values acquired in this study did not exceed the suggested threshold value. Each of the constructs captures distinctly both concepts and do not significantly overlap the other constructs in the model. In line with this, it has been seen that the criteria of discriminant validity are achieved.

Table 4.4 Collinearity Statistics (VIF)

Variable	VIF
X1 → Y	2,927
X1 → Z	1,670
X2 → Y	1,757
X2 → Z	1,670
Z → Y	2,764

Source: Authors (2026)

The possibility of collinearity among predictor variables was examined using Variance Inflation Factor (VIF) values. VIF values below 5.0 indicate that collinearity is unlikely to interfere with the estimation of the structural model (Hair et al., 2022). The findings revealed that all predictor constructs produced VIF values within the acceptable range. This result suggests that multicollinearity was not a significant issue and therefore did not threaten the robustness of the model estimation.

Table 4.5 R-square and F-square

Variable	R-square	R-adjsted	Variable	Y	Z
Y	0,595	0,583	X1	0,043	0,753
Z	0,638	0,631	X2	0,042	0,052
			Y		
			Z	0,186	

Source: Authors (2026)

The model was tested by using the coefficient of determination (R^2), which indicated the model's explanatory power. The R^2 value for Adaptability construct indicates how much Learning Agility and Employee Engagement explain the variance retained in Adaptability construct. R^2 for Employee Performance, on the other hand, is the joint effect of Learning Agility, Employee Engagement and Adaptability in the explanation of the variance in employee performance. Based on the suggestion by Hair et al. (2022), R^2 values of 0.75, 0.50 and 0.25 may be regarded as reflecting high, medium and low degrees of explanatory power.

Effect size (f^2) analysis was also performed to more precisely analyze the effect of each individual predictor. This measure can give indications of the relative contribution of each exogenous construct in the model to the endogenous. Cohen (2021) suggested that $f^2=0.02$, $f^2=0.15$ and $f^2=0.35$ indicated small, medium and large effect size, respectively.

The hypothesis in this study was tested by structurin the study in the form of a structural equation model (SEM) and using bootstrapping method in PLS approach. Path coefficients, T statistics and P values was calculated alongside the significance of the relationships between variables using the bootstrapping method. Hair et al. (2022) have explained that the level of significance that was utilized when the relationship of variables is at a 0.05 level and the T Statistics greater than 1.96 is considered as significant (Hair et al., 2022). The outcome of hypotheses tested in this study is presented in the following table.

Table 4.6 Hypothesis Testing Results

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Learning Agility → Employee Performance (X1 → Y)	0,225	0,237	0,167	1,348	0,178
Employee Engagement → Employee Performance (X2 → Y)	0,173	0,169	0,114	1,522	0,128
Learning Agility → Adaptability (X1 → Z)	0,675	0,678	0,085	7.901	0.000
Employee Engagement → Adaptability (X2 → Z)	0,178	0,184	0,102	1.739	0.082
Adaptability → Employee Performance (Z → Y)	0,456	0,455	0,162	2.815	0.005

Source: Authors (2026)

The value of the original sample is 0.225. The value of the T-statistic is 1.348 and the value of the P-value is 0.178 for the hypothesis test (H1: Learning Agility → Employee Performance [X1 → Y]). The T statistic is less than 1.96 and the P value is greater than 0.05, so we reject the first hypothesis (H1). The findings show that learning agility as such does not significantly affect employees' performance. This finding is contrary to several earlier studies that showed a positive relationship between learning agility and performance outcomes (De Meuse, 2022). However, the current finding does not necessarily contradict the fact that people with good learning capacity may not be better in their work.

In an environment where technology is widely used and things are constantly changing, learning from past experiences alone may not be enough to improve these skills. Employees can learn new knowledge and skills quickly, but until they are applied in the performance of work to address workplace issues and changes in the job requirements, their value is limited. Thus, learning agility might be considered a fundamental competency which manifests itself in performance through the extent to which an employee is capable of converting learning to adaptive behaviors. This aligns with Dynamic Capability Theory which highlights that learning must be converted to effective responses and behaviors to achieve the meaningful performance enhancement (Teece, 2021).

The results of the H2 test on Employee Engagement → Employee Performance (X2 → Y) show that the relationship between employee engagement and employee performance has an original sample value of 0.173, with a T statistic of 1.522 and a P-value of 0.128. These values do not meet the criteria for significance; therefore, the second hypothesis (H2) must also be rejected. The results of the hypothesis test for H3 (Learning Agility → Adaptability; X1 → Z) show that there is a relationship between learning agility and adaptability, with an original sample value of 0.675, a T statistic of 7.901, and a P value of 0.000. These values meet the criteria for significance; therefore, the third hypothesis (H3) is accepted. Based on the results of this study, it can be concluded that the learning agility has a significant and positive effect on adaptability. As such, the more proclivity that employees have to pick up things along the way and accept new scenarios, the better they are at adapting to new environments. This finding supports Dynamic Capabilities Theory, which explains that an individual's learning ability and flexibility are key elements in enhancing how individuals and organizations adapt to change (Teece, 2021). Further, research shows that learning agility is also a major factor of adaptive behavior in today's labour market Hair et al. (2022) teaches people to be agile in the workplace (Hair et al., 2022).

Based on the analysis of hypothesis H4 Employee Engagement → Adaptability (X2 → Z), the original sample value obtained was 0.178 with a T statistics of 1.739 and a P value of 0.082. This value does not meet the criteria for significance, so the fourth hypothesis (H4) is rejected.

The results indicate that employee engagement is not significantly associated with overall adaptability nor employee performance. This indicates that emotional commitment, involvement and passion for work may not be enough to directly foster the capacity for adaptation or its outcome. Therefore, in situations where there is high technological dynamism, full employees' adaptability to technological innovation, organizational change and job shifts may be accompanied by a high level of commitment. Engagement can then lead to a positive attitude and commitment but does not guarantee adaptive behaviours to enhance performance.

This aligns with literature that states adaptability is influenced more by learning capacity and readiness to change as well as the capacity to learn new competencies rather than emotional commitment alone (Kim & Park, 2023). Thus, although employee engagement is a valuable organizational asset, it might be necessary to include other mechanisms that support behavioural change and capability development in order to show the ability of employee engagement to contribute to adaptability and performance.

The analysis results of hypothesis H5 Adaptability → Employee Performance (Z → Y) show that the relationship between adaptability and employee performance has an original sample value of 0.456, a T statistics value of 2.815, and a P value of 0.005. These values meet the significance standards, so the fifth hypothesis (H5) is accepted. These results indicate that The fifth hypothesis (H5) is accepted since the values from the tests are

significant. The findings of this study show there is a positive and significant relationship between adaptability and employee performance. This indicates that if employees are able to adapt to changes in their workplace, technology and job requirements, then their performance will be better. The results indicate that adaptability is one key component which is significant in improving work effectiveness in an ever evolving organizational context. Based on Pulakos et al. (2021), adapting is a skill type to be adaptable, which has become much more desirable in managing the employee's productivity and performance when things changed in the organizational system and technological development (Pulakos et al., 2021).

The test of mediation was applied to find out whether the intervening variable that is adaptability exists or not in the relationship between learning agility and employee engagement on employee performances. Mediation testing in SEM-PLS research involves focusing on specific indirect effects and urges the use of the bootstrapping method Hair et al. (2022), stated that a mediatory effect can be determined by the T statistics value which is greater than 1.96 and P value which is less than 0.05 (Hair et al., 2022). The results of the mediation test can be seen in the following Table 4.7.

Table 4.7 Hypothesis Testing Results

Variable	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Learning Agility → Adaptability (Z) → Employee Performance (X1 → Z → Y)	0,308	0,305	0,109	2,812	0,005
Employee Engagement → Adaptability → Employee Performance (X2 → Z → Y)	0,081	0,088	0,063	1,295	0,195

Source: Authors (2026)

The mediation test result shows the original value (sample) is 0.308, the T statistics is 2.812, and the P value is 0.005. The values are accepted as they satisfy the significance, thus the sixth hypothesis (H6) can be accepted.

Results from the analysis show that through adaptability, the indirect impact of learning agility on employee performance is significant whereas for direct impact, it is not. This indicates a full mediation relationship where adaptability has a 100% contribution towards explaining the link between learning agility and employee performance. That's a disconcerting discovery, especially "for experience designers interested in quantifying and short-circuiting user learning by grasping how fast that learning is happening. While employees might have good learning capacities, they have to find a way to use them and create values when they are transformed into adaptive behaviours that enable them to react positively to new technologies, new processes and new requirements within the work area.

In this respect, adaptability is the missing link between learning capability and results. Those who can put knowledge gathered to use in flexible and impactful ways are more likely to work to their highest level of performance. This finding builds Dynamic Capability Theory by offering empirical evidence that adaptability serves as the mediation pathway between learning agility and employee performance, particularly in times of fast-paced and ongoing digital transformation and change within organizations.

The original sample value of 0.081, T statistic value of 1.295 and P value of 0.195, from the analysis results, indicate that employee engagement has an indirect relationship with employee performance through adaptability. These are not significant; therefore, the 7th hypothesis (H7) is rejected. This finding suggests that there is no mediating role of adaptability between the relationship between employee engagement and employee performance. That is, the current level of employee engagement is not high enough to have a significant impact on adaptability and employee performance.

These results indicate that in the context of a constantly changing and technology-driven work environment, the ability to adapt is more influenced by learning ability than by emotional engagement with work. Employee engagement can boost motivation to do more; however, Bakker and Demerouti (2022) found that if an organisation encounters complex and dynamic changes, employee engagement won't always result in adaptive employee performance (Bakker & Demerouti, 2022).

4.2 Discussion

Based on the results of hypothesis testing, it can be concluded that learning agility has a significant effect on adaptability, and adaptability also has a significant impact on employee performance. Moreover, adaptability is shown to have demonstrated to contribute to, and act as a full mediator, between learning agility and employee performance. On the other hand, employee engagement does not have a significant impact on adaptability or on employee's performance and adaptability is not capable of intervening in the relation between employee engagement and employee's performance. Based on the results of this study, it is evident that adaptability is one of the essential components of thinking about and comprehending how the learning capacity of the individual can be applied to the improvement of the employees work performance in an era of always changing working environment as affected by technology.

5. CONCLUSION

The objective of this study was exploring correlations between learning agility, employee engagement, adaptability and employee performance in the telecommunications and technology based communication services industry in Indonesia. Results, based on SEM-PLS, showed that only a part of the hypotheses were empirically supported. Learning agility had a significant and positive effect on adaptability, which in turn had a significant and positive impact on the employee's performance. Moreover, it was found that the mediation effect of the adaptability is statistically significant. But, the direct correlation between learning agility and performance was not found to be statistically significant. Similarly, no significant difference was found when using employee engagement as a predictor for adaptability or employee performance; the mediation of adaptability in the relationship between EE and EP also was not supported.

These findings indicate that employee performance within the sector examined in this study is not determined solely by employees' capacity to learn or by their level of engagement with their work. Instead, performance appears to improve when employees are able to transform learning experiences into adaptive behaviors that help them respond effectively to technological developments, organizational changes, and evolving workplace demands. This interpretation is consistent with Dynamic Capabilities Theory, which argues that learning capabilities generate value when they are converted into adaptive actions that enhance both individual and organizational outcomes (Teece, 2021).

The importance of this study is the discovery of the full mediation effect between learning agility and employee performance through adaptability. The discovery provides deeper insights on the mechanism that leads to performance increase as a result of learning agility. Learning agility does not directly shape a person's performance, but rather supports their adaptive ability which in turn, increases their performance levels. Thus the study improves the literature of organizational behavior by calling attention to adaptability as one key way of learning capabilities becoming effective job performance, if at all, especially in dynamic and technology-rich workplaces.

Still, there are some limitations that must be kept in mind in interpreting the findings. Firstly, the study relied on secondary data from 99 respondents who are working in the Communication Services Sector based on telecommunication and technology in Indonesia. Therefore, warning should be issued on generalizing the results and findings to other industries that do not present the same situation without any further empirical assessment. Second, as a cross-sectional study, perceptions and behaviors were taken at a given moment and the changes in relationships over time were not witnessed. Thirdly, the only mediating variable found in the model was adaptability, whereas there are other personal and organizational factors that may also be responsible for influencing employee's performance.

The results indicate that organizations management level should give equal considerations to both an employees adaptability and learning potential. Activities for adaptability strengthening can include ongoing learning programs, adaptive skill development programs, job rotation, enhancement of digital competencies, coaching and mentoring and change-readiness training. These efforts will make it more likely that learning agility will result in improved performance outcomes by facilitating the use of the newly gained knowledge by the employees in their normal work. This can be especially important for organisations that function in environments where technological development comes at a fast pace and organisations change continually.

Further research is suggested to be done with larger, diversified samples from additional industries for the purpose of generalizing results from these studies. Researchers could also consider using longitudinal designs that would follow the changes in employee behaviours and performance over time. Moreover, adding additional factors like digital competence, organizational culture, innovative work behavior, transformational leadership, and organizational resilience may help gain a wider picture of the mechanism by which the capacities of employees help them perform in modern workplaces.

To conclude, the findings of this study underscore the crucial link between adaptability and the link between learning agility and employee performance in the telecommunications and technology-based communication services industry. The results show that the importance of learning agility varies according to the individuals' adaptive behaviours in the workplace that translate into knowledge and experience in the context of technological and organisational change.

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