

# Does Learning Agility Depend on Age and Work Experience?

## The Study among Preschool Teachers during Covid-19 Pandemic

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### ABSTRACT

The issue on learning agility has obtained special attention especially during major changes of Covid-19 pandemic. The current study investigated the learning agility based on age and work experience, specifically how the group of age and work experience differ in learning agility and each of the dimensions namely result agility, people agility, change agility and mental agility. The sample of this study was 118 preschool teachers in Buleleng District, Bali Indonesia. The data were collected using Learning Agility Self-Assessment and proved to be valid and reliable to use. Data were analysed quantitatively using Non-Parametric Test with IBM SPSS 25.0. The findings revealed that there is a significant difference between groups based on age in learning agility and all of the dimensions, except for change agility. There younger people get, the greater their learning agility and vice versa. Moreover, there is a significant difference between groups based on work experience in mental agility, but not in other dimensions. The less experienced people get, the greater their mental agility. This result contributed to the understanding about the factors that affect rapid changes, particularly during ambiguous and uncertain situation.

**Keywords:** Age, Change, Learning Agility, Work Experience

### 1. INTRODUCTION

Covid – 19 Pandemic caused many changes in almost all sectors of human activities. Although change happens all the time to individual and organization [1], this time pandemic brought significant adjustment to human beings. In educational sector, there are a lot of effort to be done by the government as well as the educators in order to be able to maintain the quality of education in the middle of uncertain situation.

In the context of online learning during pandemic, teachers in Early Childhood Education Institution are among the most challenged compared to any other educators. Why is that? Young children generally have a short attention span and lack of control [2]. This creates a big challenge for preschool educators as they are required to be more adaptive to technology and learning innovations for the purpose to construct a more innovative learning media and strategies to the students.

To be able to rapidly adapt with the new situations, educators need to have learning agility. Learning agility is described as the willingness and capacity to learn from one's experiences and apply those lessons to new situations in order to achieve positive results [3], [4]. Learning agility is necessary for an individual to easily adapt to new changes [5], [6]. Someone who is agile in learning, they will be able to deal with new changes smoothly which makes them able to survive in their work [7], thus pushing that individual to exert their best effort at work [8]. In other words, someone who is agile is comfortable with being uncomfortable. To be an agile learner, one has to learn fast and be flexible as these two are the main components to learning ability [9]. Although there are a lot of other factors to promote good results, Connolly & Viswesvaran believed that learning agility is one of the stronger predictors compared to intellectual ability and personality in order to have optimal performance [10]. Learning agility is also considered an important variable in leadership [11]

and the level of one's current performance as well as long-term potential.

Therefore, learning agility among preschool teachers is very important remembering the challenges faced are quite big. In this study, we tried to investigate preschool teachers' learning agility based on work experience and age. It was discovered previously that the longer an individual has been working, the better their performance [12]. It is interesting to reveal whether it is similar in the case of learning agility as well. Besides that, it is several studies discovered that the older people get, the more experienced they are, and thus the better their performance. However, in the case of major changes, this might create different results as older people are less adaptive to change especially in this disruption era. Study conducted by Niessen, Swarowsky, and Leiz found that after organizational change, age was found to be negatively associated to fit and performance. [9]. Therefore, we expect similar insights obtained in the case of learning agility.

Learning agility has four dimensions according to Lombardo dan Eichnger, namely people agility, results agility, mental agility, dan change agility [3]. People agility is the ability to have a thorough understanding of themselves, can easily deal with diverse people and difficult situations, learn from experience, treat others constructively, and show a calm and resilient attitude under pressure of change. Results agility is a person's ability to be able to give good results even under difficult conditions or in new situations, inspire others to show more performance, and can build confidence in others. Mental agility is the ability to think about problems from new perspectives and should be at ease with ambiguity, complexity, and explaining their thought patterns to others. Change agility is an attitude that shows high curiosity, has a passion for new ideas, likes to experiment, and is involved in skill-building activities.

In this study, we tried to investigate how work experience and age influence the learning agility among preschool teachers in Buleleng District in Bali, Indonesia. We are curious whether some age groups or groups with certain work experience higher of lower learning agility. Thus, we formulate two main hypotheses as the following:

H1: There is a significant difference in learning agility between 20-29 year-old, 30-39 year-old, 40-49 year-old, and more than 50 year old teachers.

H2: There is a significant difference in learning agility between teachers with less than 2 years of job experience, 2-5 years of job experience, 5-10 years of job experience, and more than 10 years of job experience.

## **2. METHOD**

### **2.1 Research Design**

This is a quantitative research which investigated the difference between several groups according to age and work experience on learning agility. It is a non-experimental research by nature of investigation and a cross-sectional research by number of contacts. There are three variables in this study, namely learning agility in which it has 4 dimensions, work experience, and age. Then, people agility, results agility, mental agility, and change agility are the four dimensions of learning agility.

### **2.2. Sampling**

Population in this study were preschool teachers registered in all Kindergarten in Buleleng District, Bali Indonesia. The sample in this study was 118 preschool teachers who were obtained using convenience sampling. This technique is a technique used by researchers if the elements in the population are unknown or cannot be identified one by one [10]. In convenience sampling, researchers choose respondents because they are willing to be respondents.

### **2.3. Data Collection and Instrument**

In this research, the data were obtained using a questionnaire in the form of an attitude scale. To measure learning agility, the researcher adapted from the Learning Agility Self-Assessment developed by Gravett and Caldwell [6]. There are 25 items on the instrument which are categorized into four groups, including people agility (PA), mental agility (MA), result agility (RA), and change agility (CA). Each group has six statement items, except for result agility which has 7 statements. Items such as "if I hear a word I don't understand in a conversation, I will look for its meaning", "I enjoy working with other people trying to solve problems", "If I don't know the answer to something, then I'm fine. to ask questions", "I feel comfortable when conditions affecting my work change", "I easily retain information". In adapting this instrument, the instrument is first translated into Indonesian and then translated back into English to see the consistency of the translation. The scale used in this instrument is a Likert Scale with 5 scales including almost never (1 point), rarely (2 points), sometimes (3 points), usually (4 points), and always (5 points).

The test of validity and reliability of the instrument were conducted. Reliability was tested using coefficient alpha. In this study, it was found that the value of the alpha coefficient on the Learning Agility instrument was 0.864. This shows that the instrument in this study have good reliability, which means that the items in this instrument are homogeneous and have sufficient internal consistency to measure one factor. In order to measure validity, *Pearson Product Moment Correlation*

was used to find the correlation between each item and total score. Based on the validity test, it was found that all items were valid with  $p < 0.05$ .

**2.4. Data Analysis**

Data was analysed using descriptive statistics to find out about the descriptive information such as percentage, frequency, mean, and so on. Then, to test the hypothesis, Non-Parametric Test was conducted to find out about the difference between groups in learning agility. Test of normality was also conducted to ensure the use of right method to analyze the main data. In order to conduct these analysis, IBM SPSS 25.0 was used.

**3. RESULTS AND DISCUSSION**

**3.1. Result**

Respondents in this study consisted of kindergarten teachers in Buleleng District with the total of 118 people. The majority of respondents were 108 women and 10 men. The age range varies, ranging from the age of 20 years to 50 years and over. The 20-29 year age group was 25.4%, the 30-39 age group was 27.1%, the 40-49 year age group was 28.0%, and the >50 year age group was 19.5%. Judging from the work experience, as many as 12.7% of respondents worked less than two years, 16.9% of respondents worked 2-5 years, 9.3% of respondents worked in the range of 5-10 years, and 61.0% of respondents worked more than 10 years. The respondents are contract teachers, non-civil servant permanent teachers, and civil servant teachers.

**3.1.1. Overview of Learning Agility by Work Experience**

To see if there are differences in RA, PA, CA, MA, and LA in each group of respondents, the Kruskal Wallis non-parametric test was carried out because the distribution of research data was not normal. Based on the results of statistical tests, it was found as follows.

Based on the Table 1, it was found that there were significant differences in the Result Agility dimensions between groups with work experience under 2 years, 2-5 years, 5-10 years, and more than 10 years ( $p=0.00$ ). The group who worked for under 2 years had the highest average score ( $M=28.80$ ), followed by the group over 10 years ( $M=26.85$ ), then the group of 5-10 years ( $M=25.73$ ), and the last was group 2-5 years ( $M=25.35$ ).

Furthermore, on the People Agility dimension, it was found that there was a significant difference in the mean of the People Agility dimension between groups with work experience under 2 years, 2-5 years, 5-10 years, and more than 10 years ( $p=0.01$ ). The group who worked for under 2 years had the highest mean score ( $M=24.13$ ), followed by the group over 10 years ( $M=22.75$ ), then the group 2-5 years ( $M=21.85$ ), and the last group was group of 5-10 years ( $M=21.27$ ).

**Table 1.** The Mean Score of Each Variable Dimension based on Work Experience

Variable	Work Experience Mean				Sig.
	< 2 years	2-5 years	5 – 10 years	> 10 years	
RA	28,80	25,35	25,73	26,85	0,00
PA	24,13	21,85	21,27	22,75	0,01
CA	22,53	21,40	20,54	21,63	0,20
MA	25,93	23,15	23,18	22,59	0,00
LA	101,40	91,75	90,73	93,82	0,01
Total					

In the dimension of Change Agility, the table above shows that there is no significant difference in the mean of the dimension of Change Agility between groups with work experience under 2 years, 2-5 years, 5-10 years, and more than 10 years ( $p=0.20$ ). The group who worked under 2 years had the highest mean score compared to other groups.

Meanwhile, on the Mental Agility dimension, it was found that there was a significant difference in the mean on the Mental Agility dimension between groups with working years under 2 years, 2-5 years, 5-10 years, and more than 10 years ( $p=0.00$ ). The group who worked for under 2 years had the highest mean score ( $M=25.93$ ), followed by the 5-10 year group ( $M=23.18$ ), then the 2-5 year group ( $M=23.15$ ) and the last group was group over 10 years ( $M=22.59$ ).

Finally, on the Learning Agility variable, it was found that there was a significant difference in the mean of the Learning Agility dimension between groups with working years under 2 years, 2-5 years, 5-10 years, and more than 10 years ( $p=0.01$ ). The group who worked for under 2 years had the highest mean score ( $M=101.40$ ), followed by the group over 10 years ( $M=93.82$ ), then the group 2-5 years ( $M=91.75$ ), and the last group was group of 5-10 years ( $M=90.73$ ).

A follow-up test using Post hoc was conducted to see which of the groups differed significantly. Post Hoc test results are shown as follows.

From the Table 2, it is known that the significant difference between groups was caused by the pairing between the group under 2 years old with the group of 2-5 years old, 5-10 years old, and over 10 years old. When viewed from the difference test between the 2-5 year group with the 5-10 year group and the group above 10 years, no significant difference was found.

Similarly, between the 5-10 year group and the group above 10 years

Through different and post hoc tests, it can be concluded that the length of time an individual works in an agency can contribute to the level of learning agility. Individuals who worked for no more than 2 years showed significantly greater results of agility, people agility, mental agility, and learning agility compared to those who worked longer.

**Table 2.** Post hoc test

Group Pair	Post Hoc				
	RA	PA	CA	MA	LA
1-2	0,00	0,01	0,54	0,00	0,00
1-3	0,00	0,01	0,03	0,00	0,00
1-4	0,01	0,02	0,15	0,00	0,00
2-3	0,92	0,33	0,31	0,97	0,47
2-4	0,11	0,25	0,87	0,17	0,61
3-4	0,27	0,08	0,11	0,40	0,22

*3.1.2. Overview of Learning Agility by Age*

The results of the non-parametric test using Kruskal Wallis on Learning Agility variables based on age groups are described as follows.

Based on the Table 3, there are significant differences in Mental Agility between the age groups of 20-29 years, 30-39 years, 40-49 years, and > 50 years. The age group of 20-29 years showed the highest mean (M=24.00), followed by the age group of 30-39 years (M=23.81), then the age group of 40-49 years (M=22.84), and age group of >50 years (M=21.65). In addition, there were no significant differences between age groups in the dimensions of Result Agility, People Agility, Change Agility, and Learning Agility.

Furthermore, in the post hoc test it was found that there was a significant difference in Mental Agility between the 20-29 years and 40-49 years age groups (p = 0.05), between the 20-29 years and >50 years age groups (p = 0.00), and between the age group of 30-39 years and >50 years (p=0.00). Meanwhile, in the age group of 20-29 years and 30-39 years, 30-39 years and 40-49 years, as well as the age group 40-49 years and >50 years, no significant differences were found.

**Table 3.** The Mean Score of Each Variable Dimension based on Age

Variable	Age Mean				Sig.
	20-29 y'old	30-39 y'old	40-49 y'old	> 50 y'old	
RA	26,80	27,03	26,18	27,04	0,43
PA	23,10	22,50	22,51	22,39	0,71
CA	22,13	22,21	20,81	21,17	0,09
MA	24,00	23,81	22,84	21,65	0,00
LA	96,03	95,56	92,36	92,26	0,11
Total					

**3.2. Discussion**

According to the results obtained, there is a significant difference between groups of respondents based on the work experience. It is indicated that people who work less than 2 years have the highest learning agility. Similar results were obtained in the each dimensions of learning agility, namely result agility, people agility, change agility and mental agility, although the result for change agility was not significant. This is in contrast to the findings of a study done by Saragih who suggested that the longer an individual has been working, the better their performance [12]. Thus, from this notion, it can be inferred that people who work long enough in an institution must be able to exert their best performance no matter how hard or challenging the situation is. However, the result in this study showed different result in which people who has the least work experience is the most agile compared to people who work longer in that institution, thus may be able to create better performance. Younger teachers are more able to deal with new changes smoothly so that they can successfully adapt in their work during major changes.

On the other side, the study also revealed that there is a significant difference in mental agility between group of respondents based on age. The significant result only exists in the dimension of mental agility but not on other dimensions or the learning agility itself. People in 20-29 years of age showed significantly greater mental agility than people in 30-39, 40-49, and >50 years of age respectively. This means that the younger teachers get, the greater their mental agility during major changes of Covid-19 pandemic. This is true because as people get older, cognitive abilities such as information processing speed and working capacity deteriorate. [15], thus making it hard for older people to think about problems from new perspectives and should be at ease with ambiguity, complexity, and explaining their thought patterns to others.

In addition to that, the result of this study is also aligned with the study conducted by [13] which discovered that age is negatively related to performance after organizational change, and this relationship is mediated by job experience. Something that can be understood from this enlightenment is that the younger people get, the better their performance after change and the more experienced people get, the more difficult for them to adapt to major changes. This supports the current study in a way that during major changes, younger and less experienced people may be better able in learning from their experience and apply those things to create good outcomes in new situations. This is true especially during changes of Covid-19 pandemic.

#### 4. CONCLUSION

Learning agility is an important factor to create successful change during Covid-19 pandemic. Teachers who are hugely affected by the pandemic, must be able to adapt with new methods of teaching and curriculum in order to ensure the best education for students despite an unexpected condition of this pandemic. Younger and less experienced individuals showed generally greater learning agility than those who are older and more experienced individuals. This sheds light on the fact that cognitive capability of older individuals decline, thus making it hard for them to adjust to new situations. On the other hand, more experienced individuals are generally more difficult in adapting to new changes as they might stuck with old methods and environment. Their limited cognitive capability may also affect their inflexibility. This is especially true during major changes in which people are faced with ambiguous condition and the result is still uncertain.

Future research should further investigate the contribution of age and work experience on learning agility. Other factors such as educational level, employment status, and personality trait may also be some other important factors that affect learning agility. The relation between learning agility and other variables related to organizational change are also worth investigating, such as commitment to change, readiness to change, and work performance as the result might give the new lights on ensuring the better organizational dynamics during or post major changes.

#### AUTHORS' CONTRIBUTIONS

Dewa Ayu Puteri Handayani, conceived of the presented idea, performed the computations, verified the analytical methods, and wrote the final manuscript.

Didith Pramunditya Ambara, created an instrument and collected the data.

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