

## THE RELATIONSHIP BETWEEN MINDSET OF PRE-SERVICE ELEMENTARY SCHOOL TEACHER AND ACADEMIC ACHIEVEMENT

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### *Abstract*

*This study aimed to examine the relationship between mindset and academic achievement. Data of mindset collected through a survey adopted, adapted, and translated. While data on academic achievement was collected from the study report of students. This research sampled 41 pre-service teachers in their final year. Data were statistically analyzed by using the correlation test of Pearson. The results show that first, growth mindset with some fixed mindset dominated Elementary school pre-service teachers with 82%. Second, pre-service teachers had superb academic achievement. More than half of the academic achievement is categorized into cumlaude. Third, the relationship between mindset and academic achievement is very low / very weak. This means that the mindset does not correlate to the academic achievement of pre-service teachers.*

**Keywords:** Teacher Mindset, Growth Mindset, Fixed Mindset, Academic Achievement

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### **BACKGROUND**

Although academic achievement is not the most influential factor in students' success after graduating, it shows how they do during their studies. The grades they earn could show how well they studied. Students' academic achievement could be influenced not only by cognitive abilities and content knowledge, but also other aspects, such as students' beliefs, efforts, attitudes, and values, which Dweck (2015) termed as a 'mindset'.

*Mindset* is defined as the way someone realizes his ability to see and understand the world (Dweck, 2015). A person's mindset will be drawn from his attitude and behavior or actions when responding to an event he experienced or phenomenon that he saw. When there is a change in mindset, then the action also changes (Khuzaeva, 2014). Dweck divides the mindset into two, namely growth mindset and the fixed mindset (Dweck, 2015). A growth mindset is a mindset that believes that intellectuals can be developed, while a fixed mindset is a mindset that believes that intellectuals are fixed (Dweck, 2015). This means that a growth mindset is related to effort. However, she also emphasized that a growth mindset is not only about effort because misconceptions equate a growth mindset only with effort (Dweck, 2015). The effort is key to students' academic achievement, but students need many new strategies and approaches to learning and developing. The growth mindset used in learning approaches will help students progress to challenges and obstacles in learning (Dweck, 2015).

Research related to growth mindset and learning has been done. Education Week Research Center (EWRC, 2016) provides research reports that teachers who believe in a growth mindset have the potential to develop, achieve or streamline the teaching and

learning process. Curtiss (2017) stated that prospective teachers' beliefs are related to pedagogical decisions in learning. Kodrat (2019) mentioned that changes in the mindset of teachers, parents, and stakeholders are needed to encourage students to be actively involved in learning activities. If learning does not present verbal affirmations and a growth mindset, learning achievement may be constrained (Jorif & Burleigh, 2020).

Besides, research related to the growth mindset and academic achievement has been conducted throughout primary and secondary schools. The application of growth mindset practices in learning can be said to be an innovative learning practice needed to improve students' academic progress (Jorif & Burleigh, 2020). Teachers who apply to learn with the concept of a growth mindset allow their students to improve their academic development (Jorif & Burleigh, 2020). Ronkainen, Kuusisto, and Tirri (2019) mentioned that the feedback was given by teachers by saying "not yet" can change the mindset of students towards a growth mindset. OECD has released those countries placed at the low rank of PISA score (North Macedonia, Panama, Indonesia, Kosovo, and the Philippines) show that two-thirds of their students are categorized into the fixed mindset. However, OECD has not examined the relationship between the mindset and PISA Score (OECD, 2018). Besides, the effect of mindset and academic achievement among university and college students is bewildering and not well understood (Bazelais et al., 2018).

The Ministry of Education, Culture, Research, and Technology has planned and implemented many efforts to improve education in Indonesia. Mindset, an aspect that has not been reached in many education development programs (Prastowo, 2015), is now seen as a fundamental matter in improving education quality. Mindset-related education development programs are not merely for teachers and schools, but also for students at universities throughout Independent Campus, Freedom to Learn (Merdeka Belajar Kampus Merdeka). Minister of Education and Culture, Nadiem Makarim also mentioned the importance of teachers having a growth mindset, because teachers who have such a mindset must believe that every teacher and learner has the potential to be better (GTK Secretariat, 2021). In addition, Nadiem also said that having a growth mindset is one of the most important characteristics of driving teachers (GTK Secretariat, 2021). Guru Penggerak is a program carried out by the Directorate General of Teachers and Education Personnel that aims to provide leadership education for teachers to become *instructional leaders* (GTK Secretariat, 2021). Besides, Nizam, a General Directorate of higher education, Research, and Technology, has examined that students' academic achievement increased lately. Students of Department of Elementary School Teacher, Esa Unggul University, have an increasing academic achievement as well.

Department of Elementary School Teacher, Esa Unggul University is one of the study programs, in which has many students participated in Independent Campus, Freedom to Learn. So, the students experienced the mindset-related education development program. Before they guide their students in the growth mindset process, it is highly recommended that they as pre-service teachers should experience the growth mindset process (Gutshall,

2014). Especially for elementary school teachers, as the first layer of formal education, he needs to have a growth mindset to "create" students who grow mindset as well so that academic achievement becomes better. According to Collier, Houston, Schmatz, and Walsh cited by Andi (2015), primary education aims to develop students' intellectual and mental abilities, prepare students to become independent individuals, develop students like social beings, develop the ability to live with changes and enhance their creativity. To achieve this goal, a growth mindset is needed. So, this study aims to examine the relationship between mindset and academic achievement of students at the Department of Elementary School Teacher, Esa Unggul University.

## RESEARCH METHOD

This research is conducted using quantitative research approaches and using a correlation study. This research uses a survey research design. Research survey is research used to find out the picture of characteristics, beliefs, and opinions about an object or behavior (Sugiyono, 2014) The subject of this study was a student of semester 8, class of 2017, PGSD study program of Esa Unggul University, which amounted to 51 students determination of the subject of this research is because the 8<sup>th</sup>-semester students have participated in Field Experience Practice (PPL) activities.

The data was collected using questionnaires adopted from mindset quizzes from the University of Illinois, Chicago, and translated into Indonesian. Questionnaires are created in the form of Google Form which then the Google Form link is sent to the respondent. The questionnaire filling time is for 1 week in the hope that all respondents fill out the questionnaire. However, after 1 week, respondents filled out questionnaires as many as 52. Of 52 respondents, there were some of the same respondents so one of them was canceled. So, a total of 41 students were respondents. While data on academic achievement was drawn from the latest students' GPA. To examine the relationship, the data will be tested statistically by using correlation analysis Pearson.

## RESULTS

### *Mindset Pre-service teacher SD*

After analyzing the data, the mindset of pre-service elementary school teachers is obtained as follows:

*Table 1. The mindset of Pre-Service Elementary School Teacher by Age*

Mindset	Age 21	Age 22	Age 23	Age 25	Age 27	Total
<i>Strong Growth Mindset</i>	1 (2%)	1 (2%)	0		1 (2%)	3 (6%)
<i>Growth Mindset with some Fixed Mindset</i>	6 (15%)	18 (43%)	9 (22%)	1 (2%)	0	34 (82%)

<i>Fixed Mindset with some growth Mindset</i>	1 (2%)	3 (7%)	0	0	4 (9%)	
<i>Strong Fixed Mindset</i>	0	0	0	0	0	
Total	8 (19%)	22 (53%)	9 (22%)	1 (2%)	1 (2%)	41 (100%)

From table 1 can be seen that pre-service elementary school teachers, at Esa Unggul University, have a growth mindset with some *fixed mindset ideas* with the number of 34 prospective elementary teachers (82%). Of pre-service elementary school teachers, 9% have a *Fixed Mindset with Some Growth Mindset* and 6% with *Strong Growth Mindset*, and none of the prospective elementary teachers have a *Strong Fixed Mindset*.

When analyzed by age, the mindset of pre-service elementary school teachers is diverse. The *Growth Mindset with Some Fixed Mindset* is spread throughout the ages, in which age 22 dominated the mindset, followed by age 23 and age 21. Meanwhile, the *Fixed Mindset with Some Growth Mindset* reached 9%, all at the early age of 20. The *Strong Growth Mindset* with 6% happened at the age of early 20 and late 20.

### ***Academic Achievement***

After analyzing the data, the GPA of pre-service elementary school teachers is obtained as follows:

*Table 2. GPA*

<i>GPA Category</i>	<i>Number</i>
<i>Cumlaude (3,51-4)</i>	27 (66%)
<i>Very Satisfactory (2,76-3,50)</i>	14 (34%)
<i>Satisfactory (2,00-2,75)</i>	0
Total	41 (100%)

From table 2, it can be seen that the GPA of pre-service elementary school teachers, at Esa Unggul University, is categorized into three groups: cumlaude, very satisfactory, and satisfactory. The data shows that pre-service elementary school teachers have a GPA which is categorized merely into two categories: cumlaude with 27 (66%) and very satisfactory with 14 (34%). The highest GPA is 3.92 and the lowest is 3.28, the average is 3.58. None is grouped into satisfactory.

### ***The Relationship between the Mindset and Academic Achievement***

The data collected were analyzed by using correlation analysis. The result shows as follows:

*Table 3. Correlation Results*

	<i>Mindset</i>	<i>Academic Achievement</i>
<i>Mindset</i>	1	-0,041255127
<i>Academic Achievement</i>	-0,041255127	1

According to the results of the Pearson correlation analysis seen in table 3, obtained a significant value of -0.041. The value is in the qualifying range of 0.00 – 0.199 with very low qualification. Thus it can be concluded that the relationship between mindset and academic achievement is very low. Besides, the negative sign means that the relationship between mindset and academic achievement is in the opposite direction. However, since the relationship is very weak, the negative sign could be meaningless.

## DISCUSSION

The mindset in this study focused on two aspects: The mindset related to ability (ability) and mindset related to character (personality) was the most aspects covered in this study. The results show that the majority of pre-service elementary school teachers have a Growth Mindset with Some Fixed Mindset Ideas. The Fixed mindsets that remain are, *first*, they appreciate feedback, yet sometimes they take it personally. They sometimes think the feedback is about their personality, not their performance. In this matter, the way feedback is given can affect how the pre-service elementary school teachers perceived the feedback. Ronkainen, Kuusisto, and Tirri (2019) mentioned that the feedback was given by teachers by saying "not yet" can change the mindset of students towards a growth mindset. *Second*, they believe that good and kind people are born with it. People do not often change. This understanding closes the possibility of people learning to be good. Whereas everyone has the potential to be good through education in his environment shown through examples of role models. In addition, Character Education becomes one of the ways to educate someone to change for good. One of the characters' education goals is to develop effective potency of children to be citizens who possess character and cultural values (Omer, 2015). *Third*, they perceived that although they can do things differently, the important parts of them are not changed. Doing many things differently could mean curiosity and hard work, which indicate creativity (Ru'iyah, 2018). *Fourth*, they believe that smart people do not necessarily require hard work. All scientists in the world keep working hard to reach and realize their goals. For example, Thomas Alfa Edison often works at his laboratory or factory for twenty hours, with only brief pauses for meals (Kennelly, 1931).

Based on the data analysis, the relationship between mindset and academic achievement is very weak. This could be because the academic achievement in this study is cognitive-based evaluation and many factors influenced such as competence, comprehension, and docent as a teacher. The surprising result is that the negative sign of the value, which means the relationship between mindset and academic achievement is in the opposite direction. This could be because pre-service elementary school teachers with a

growth mindset have almost the same academic achievement as those with a fixed mindset. Even, some pre-service elementary school teachers with a fixed mindset have better academic achievement than those with a growth mindset. The mindset did not influence intellectual performance (Adam & Panatik, 2021) and mindset scores did not significantly predict students' performance (Mokhithi et al., 2020). This could be because that mindset could be merely a mediator in academic achievement (Zhang et al., 2017).

## **CONCLUSION**

Based on the results and data analysis that has been done, it can be concluded that the Mindset profile of pre-service elementary school teachers is in the category of Growth Mindset with Some Fixed Mindset. Fixed Mindset that still accompanies the prospective elementary teachers includes two things, namely character (personality) and ability (ability). In terms of character, pre-service elementary school teachers still consider that to be good or kind is born with it and perceived that there is no change of important parts of them after doing many things differently.

While in terms of ability, pre-service elementary school teachers still perceived that the feedback they receive is related to themselves. This means that pre-service elementary school teachers need to be given a deep understanding of the concept of feedback on lecture materials such as learning evaluation courses. In addition to feedback, pre-service elementary school teachers still believe that smart people do not need to try hard.

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This research did not take into account sociological and anthropological factors that might influence the formation of the mindsets of elementary school teacher candidates. Further research is still very open and wide-ranging the possibility to dig deeper into the impact or influence of mindset on learning with more complex variables such as how docents give feedback.

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