



## The Effect of Visual Learning Style and Critical Thinking Ability on Learning Outcomes of Islamic Education Students Batch 2022 Faculty of Tarbiyah and Keguruan at UIN Alauddin Makassar

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### Abstract

The aims of this research are: 1) Analyze the influence of learning styles on the learning outcomes of PAI students in the class of 2022 at the tarbiyah and teacher training faculty at UIN Alauddin Makassar, 2) Analyze the influence of critical thinking on the learning outcomes of PAI students in the class of 2022 at the tarbiyah and teacher training faculty at UIN Alauddin Makassar, 3) Analyze the influence of learning styles and critical thinking on the learning outcomes of PAI students in the class of 2022, tarbiyah and teacher training faculty at UIN Alauddin Makassar. This research method uses quantitative, this type of research is ex post facto and uses a pedagogical approach. The sample in this research was PAI students class of 2022 who were obtained using a sampling technique, namely the saturated sampling technique. The number of samples in the 2022 PAI class is 56 students. To collect data using learning style questionnaire instruments and critical thinking questionnaires. Research data was analyzed using descriptive data analysis and multiple linear regression analysis or using the t test and f test. The results of descriptive analysis on the visual learning style variable obtained an average value of 51.61, which means the medium category and critical thinking obtained an average value of 42.21, which means the medium category while learning outcomes obtained an average value of 3.78, which means the medium category. Based on the results of data analysis, the coefficient table shows that visual learning style influences learning outcomes with a sig of 0.001. Critical thinking influences learning outcomes with a sig value of 0.001. In the multiple regression test, the ANOVA results found that visual learning style and critical thinking both had an influence on learning outcomes with a value below 0.005, namely 0.001. The implication of this research is that existing stakeholders can improve students' critical thinking and pay attention to dominant learning styles so that they can improve student learning outcomes

**Keywords:** Visual learning Style, Critical Thinking, Learning Outcomes

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Abstrak Tujuan Penelitian ini adalah: 1) Menganalisis pengaruh gaya belajar terhadap hasil belajar mahasiswa PAI pada angkatan 2022 fakultas tarbiyah dan keguruan di UIN Alauddin Makassar, 2) Menganalisis pengaruh berpikir kritis terhadap hasil belajar mahasiswa PAI pada angkatan 2022 fakultas tarbiyah dan keguruan di UIN Alauddin Makassar, 3) Menganalisis pengaruh gaya belajar dan berpikir kritis terhadap hasil belajar mahasiswa PAI pada angkatan 2022 fakultas tarbiyah dan keguruan di UIN Alauddin Makassar. Metode penelitian ini menggunakan kuantitatif dengan jenis penelitian ini adalah *ex post facto* serta menggunakan pendekatan pedagogik. Sampel dalam penelitian ini adalah mahasiswa PAI angkatan 2022 yang diperoleh menggunakan teknik pengambilan sampel yaitu teknik sampling jenuh. Jumlah sampel pada angkatan 2022 PAI berjumlah 56 siswa. Untuk mengumpulkan data menggunakan instrumen angket gaya belajar dan angket berpikir kritis. Data penelitian dianalisis dengan menggunakan analisis data deskriptif dan analisis regresi linear berganda atau menggunakan uji t dan uji f. Hasil analisis deskriptif pada variabel gaya belajar visual memperoleh nilai rata-rata sebesar 51,61 yang artinya kategori sedang dan berpikir kritis memperoleh nilai rata-rata sebesar 42,21 yang artinya kategori sedang, sedangkan hasil belajar memperoleh nilai rata-rata sebesar 3,78 yang artinya kategori sedang. Berdasarkan hasil analisis data diperoleh tabel *coefficient* bahwa gaya belajar visual berpengaruh terhadap hasil belajar dengan sig 0,001. Berpikir kritis berpengaruh terhadap hasil belajar dengan nilai sig 0,001. Pada uji regresi berganda ditemukan hasil ANOVA bahwa gaya belajar visual dan berpikir kritis sama-sama berpengaruh terhadap hasil belajar dengan nilai dibawah 0,005 yaitu 0,001. Implikasi penelitian ini agar para stakeholder yang ada dapat meningkatkan berpikir kritis mahasiswa dan memperhatikan gaya belajar dominan sehingga dapat meningkatkan hasil belajar mahasiswa

**Kata Kunci :** *Gaya belajar Visual, Berpikir Kritis, Hasil Belajar*

## Introduction

Education is one of the foundations of a country. Because education plays an important role in the progress and development of the world. Education is an important concern for every country in order to produce superior human resources and

become a driving force. But more than that, education aims to develop and direct individuals to become human beings who have a better personality (Rahmat Hidayat, 2016) This is in line with Indonesian education which has the aim of developing human personality and abilities. Referring to

Law No.20 of 2003 concerning the national education system, the function of education is Article 3 which states that “National education functions to develop abilities and shape the character and civilization of a dignified nation in order to educate the nation's life, aims to develop the potential of students to become human beings who are faithful and devoted to God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens” (Sujana, 2019). Therefore, education plays an important role in human development and growth and as a long-term investment. Therefore, it is appropriate if education becomes the center of important attention. It is because of this importance that

learning in education must be designed in such a way as to get the expected output.

Jufri Dolong, a DPK lecturer at UIN Syarif Hidayatullah Jakarta, stated that the learning component is a whole system that supports each other. The components include learning objectives, students, educators, teaching materials, methods, media and evaluation (Dolong, 2016). Students as a component in the learning process are required to study hard in order to achieve good learning outcomes. Learning success is characterized by changes in students for the better, including changes in thinking patterns, feelings, understanding, and behavior in general. The success of student learning is influenced by several

factors, such as intelligence, interests, talents, socio-economic conditions, parental attention, teaching methods, media, curriculum, readiness, and socializing. (Suardi, 2018).

Seeing the factors of learning success above that external factors also help in improving learning outcomes. However, internal factors, which the author means here is the campus has a greater role in improving student learning outcomes, one of which is by improving the quality of education. The quality of effective and satisfying education delivery is the hope of all parties involved, such as teachers or lecturers, parents and society. However, sometimes these expectations are not met due to several factors, such as subject matter, teaching and learning strategies that

are not optimal, and the students themselves. (Octavia, 2019, p. 56)

Therefore, some of the factors above the author focuses more on the problem of teaching and learning strategies that are not optimal. In essence, the learning process has a procedural or sequence so that planning is successful. The sequence in learning activities is as follows:

1. A learning approach is the initial framework for reviewing learning problems, considered most likely to ensure the success of learning activities effectively and efficiently.

2. A learning model is a representation of a learning phenomenon, whether real or abstract, that highlights the elements within that phenomenon.

3. A learning strategy is the general pattern and sequence of actions taken by teachers and students in carrying out teaching and learning activities.

4. A learning method is a way used by teachers and students during the teaching and learning process to achieve learning objectives.

5. A learning technique refers to the art performed by teachers and students in the teaching and learning process specifically to achieve learning objectives (Hakim et al., 2019).

Considering the sequence above, it can be stated that the suboptimal teaching and learning strategy may be due to inappropriate or unknown methods. In fact, lecturers also need to

understand the learning characteristics or situations preferred by students; at the very least, they should know the learning methods of each student to ensure the learning process runs effectively and efficiently. Every individual is a unique entity with different characteristics, so no two people are exactly the same. Differences between individuals can be viewed from two perspectives: horizontal and vertical. Horizontal differences include psychological differences between individuals, such as levels of intelligence, abilities, interests, memory, emotions, willpower, personality, and so on. From a vertical perspective, no two individuals are identical in physical aspects such as shape, size, strength,

and endurance (Ghufron & Rini Rismawati, 2010).

"Regarding the differences in individual characteristics, an educator should already be aware of this, considering that educators possess four competencies. According to the Law on Teachers and Lecturers and Government Regulation No. 19 of 2005, the competencies of teachers/lecturers include pedagogical/methodological competence, professionalism, social competence, and personal competence (Febriana, 2019). Among these four competencies, pedagogical competence plays an important role in determining the appropriate method, as it requires educators to understand the characteristics of each of their students. This aligns with the

definition of pedagogy itself, which refers to a lecturer's competence in managing student learning, including understanding students, designing and implementing learning, evaluating learning outcomes, and developing students to actualize their various potentials.

This understanding helps lecturers identify the most appropriate and efficient methods for the learning process. Sometimes, students prefer their lecturers to teach by writing all the information on the board so they can read and try to understand it. There are also students who prefer verbal teaching, where the lecturer delivers the material orally, and the students only need to listen and interpret the explanation in a way that is easy for them to understand. The differences in

how students process information are influenced by their different learning styles.

As previously explained, each individual has a unique character, and no two people have exactly the same life experiences, so it is certain that each person's learning style differs from one another. Two children who grow up in similar conditions and environments and receive the same treatment may not necessarily have the same understanding and outlook on the world around them. Everyone has their own perspective on each event they see and experience. This perspective is what is referred to as a learning style. By considering these differences and their causes, the assumption that providing the same learning materials, methods, and assessments to all

students will yield the same results can be dismissed. This is incorrect because even though all students are treated the same, it must be remembered that each individual learner is unique, with different personalities, abilities, emotions, interests, and learning styles."

"These differences also lead to a person's thinking abilities, particularly those of a student who has progressed through several levels of education, making their thinking abilities much higher than those at lower levels. This thinking ability is known as critical thinking. This aligns with the author's findings during a preliminary survey in the field, where it was clearly observed that there were different learning styles in the three classes the author observed. Despite this, the students'

abilities were quite good in the teaching and learning process, with students being more active and critical in responding to questions and problems that arise in real-life situations.

Therefore, the reason the author chose this title is to analyze the learning styles used and the critical thinking abilities of PAI students from the 2022 cohort at the Faculty of Tarbiyah and Teacher Training at UIN Alauddin Makassar, in relation to improving their learning outcomes. The variables in this study include the independent variables, which are learning styles and critical thinking, while the dependent variable is learning outcomes. The importance of this research lies in improving students' learning outcomes by considering their

learning styles and critical thinking abilities."

### **Research Method**

This research is correlational in nature, as it is designed to determine the influence of independent variables (learning styles and critical thinking) on the dependent variable (learning outcomes). This aligns with Suharsimi Arikunto's definition of correlational research: research aimed at determining whether or not there is a relationship, and if there is, how strong the relationship is and whether it is significant or not. Correlational research also aims to compare measurement results between different variables to determine the level of the variables (Arikunto, 2010, p. 270).



Thus, the extent of the influence of the independent variables (learning styles and critical thinking) on the dependent variable (learning outcomes) can be determined through the analysis of the obtained data, which will be expressed in numerical terms, considering this is a quantitative study.

The research approach is *ex post facto*, meaning that the study is conducted after the events have occurred. The sample selection technique used is saturated sampling, meaning the entire population is used as the sample. This is because the population consists of 56 respondents, which aligns with Arikunto's opinion that if the population is less than 100 people, the entire population should be taken as the sample. The data collection method involves using

questionnaires in the form of statements. The analysis techniques used are descriptive analysis and inferential statistical analysis. The classical assumption tests include normality test, multicollinearity test, and heteroscedasticity test, with the final step being correlational analysis using multiple linear regression tests.

## Research Results and Discussion

### 1. Descriptive Analysis of Visual Learning Style on Learning Outcomes of PAI Students from the 2022 Cohort at the Faculty of Tarbiyah and Teacher Training at UIN Alauddin Makassar

A learning style is a unique and individual way that students use to receive and process information and knowledge. Learning styles vary among visual, auditory, and

kinesthetic, and students may have a combination of all three styles. Students may listen to the lecturer's explanations, memorize by repeatedly reading, work on problems through discussions or group work, actively engage in Q&A with lecturers or classmates, and take notes on important points of the lesson. Lecturers must recognize and understand the learning styles of their students and teach in a way that aligns with these learning styles.

Based on the initial observation, the learning styles of PAI students from the 2022 cohort are highly varied. This is reflected in the mean values obtained, which are 51.61, 50.21, and 49.48. The median values are 50.00, 51.00, and 48.50, while the minimum and maximum values obtained are 35,

37, 36 & 69, 65, 61, respectively. These values determine the quality of the variable itself, with learning styles falling into the moderate category, having an average score of 51.61 for visual, 50.21 for auditory, and 49.48 for kinesthetic. Considering these results, it is possible that the hypothesis may be either accepted or rejected, as the variable quality is moderate, indicating that this variable may or may not have an impact..

### **1. Descriptive Analysis of Critical Thinking on Learning Outcomes in Islamic Education Students Class of 2022 Faculty of Tarbiyah and Keguruan at UIN Alauddin Makassar**

Critical thinking is an important skill for students to develop, especially in the context of solving

HOTS (Higher Order Thinking Skills) questions in various subjects. Several studies have been conducted to determine the factors that inhibit critical thinking in university students and to develop methods to improve this skill. The ability to think critically of PAI students class of 2022 is quite good, this is based on the results of the mean value obtained which is 42.21, the median value is 41.00, then the minimum and maximum values are 33 & 55 this is also a reference in the calculation of standard deviation so that a value appears that can determine the quality of the variable itself, namely the average value of 42, 21 in the medium category. So this can affect the results of critical thinking

on student learning outcomes in the class of 2020 at UIN Alauddin Makassar. Pengaruh Gaya Belajar Visual Terhadap Hasil Belajar Belajar Mahasiswa PAI Pada Angkatan 2022 Fakultas Tarbiyah Dan Keguruan di UIN Alauddin Makassar

There is a significant influence between visual learning styles on the learning outcomes of PAI students as indicated by the significance value of  $t$  for the visual learning style variable is 0.001 and the value is smaller than the probability of 0.05 ( $0.001 < 0.05$ ). So that in this test shows that  $H_a$  is accepted and  $H_o$  is rejected. This means that there is a significant influence between visual learning styles (X1) on the learning outcomes of PAI students (Y) at the Faculty of

Tarbiyah and Keguruan at UIN  
Alauddin Makassar.

This visual learning style focuses on visual acuity. This means that concrete evidence must be shown first for students to understand. Students who have a visual learning style are a high need to see and capture information visually before they understand it. Students who have a visual learning style have a tendency to always be neat and organized besides that students who have a visual learning style also tend to do things carefully and in detail so that what they care about is appearance covering various things including learning outcomes.

On the other hand, students who have a visual learning style are the type of people who prefer to read

something rather than listen or practice it. They are a group of fast readers. So that all instructions will be more easily accepted if it is in the form of written instructions. People with visual learning styles like to follow illustrations, read instructions, observe pictures, review events directly, and so on. This greatly influences the selection of learning methods and media that dominantly activate the sense of sight (eyes) (Subini, 2021). A visual type, will quickly learn materials that are presented in writing, charts, graphs, pictures. Anyway, it is easy to learn learning materials that can be seen with the visual apparatus. Conversely, it is difficult to learn when faced with sound, or movement materials. (Ahmadi & Supriyono, 2008)

From the illustration above, it is obtained if students who have a visual learning style will more easily accept material that has to do with visuals. This is because a lot of the material taught is in the form of how to do something or implementation in everyday life. From the above discussion, we can conclude that there is a very big influence of visual learning styles on student learning outcomes.

1. The Effect of Critical Thinking on the Learning Outcomes of Islamic Education Students in the Class of 2022 Faculty of Tarbiyah and Keguruan at UIN Alauddin Makassar

There is a significant influence between critical thinking on the learning outcomes of PAI students in the Class of 2022 with a significance value of  $0.001 < 0.05$ . So that  $H_0$  is rejected and  $H_a$  is accepted in this test. It can be interpreted that there is a significant influence between critical thinking on the learning outcomes of PAI students in the 2022 batch of Tarbiyah anduruan faculty at UIN Alauddin Makassar.

Critical thinking skills are very important for students because they will be able to solve the problems faced by taking or making effective solution decisions. Kamarulzaman suggested that critical thinking is the ability to make decisions and solve problems. (Kholid, 2021) The key component of critical thinking skills is the ability to

evaluate other people's statements and be able to understand and explore a problem to determine a solution. (Ritonga, 2021) People who are skilled at using critical thinking skills in various fields of life will succeed in avoiding failures caused by poor decision making (Ghofur & Raharjo, 2018). Critical thinking can provide a deeper understanding of oneself (Annisa et al., 2020). Thus, people who think critically will be careful in making decisions. In addition, the decisions that have been taken are the result of a mature thinking process.

Maria, et al, revealed that critical thinking is a reflective process that leads to action and to develop it students must think about what they think. (Susanti et al., 2021) So, through critical thinking skills, students are

able to analyze their own thoughts, and can take an action in dealing with their problems. The ability to think is one of the assets that students must have as a basis for facing the development of science and technology in the 21st century. Because, a person's success depends on his thinking ability, especially in solving the life problems he faces.(Youlanda et al., 2020).

Critical thinking skills make students accustomed to facing challenges and solving problems by analyzing their own thoughts to decide on an action. Thus, students who think critically, intelligently assess themselves. What are the advantages and disadvantages that exist in him, what to do when a problem occurs in him, what to evaluate, and so on. As Sokrates has said in Zamroni, that

knowing oneself is the basis for acting appropriately, then as critical thinkers we also need to assess ourselves, meaning that we also dare to evaluate ourselves. (Zamroni & Mahfudz, 2009)

Critical thinking skills must continue to be trained, so that one is accustomed to thinking critically in taking action. Especially taking actions that will be taken. So that all actions taken are the result of critical thinking. This can minimize the chance of errors in taking action. Based on the analysis above, it can be concluded that the better the critical thinking skills of students, the better the student learning outcomes.

This can be strengthened by the results of observations and research data, namely students are more active in expressing opinions well, describing

explanations logically, and conveying information they know straightforwardly in class. The critical thinking skills that students build cannot be separated from the reconstruction of knowledge built at the previous level. Based on the research data, it was found that the educational background of PAI students class of 2022, namely 19 people came from Islamic boarding schools, 19 people from madrasah Aliyah both private and public, 14 from public schools and 4 from vocational schools. If researchers analyze it is natural that the critical thinking skills of PAI students of class 2022 are better because of the knowledge that has been built into their critical thinking.

1. The Effect of Visual Learning Style and Critical Thinking on Learning Outcomes of Islamic Education Students in the Class of 2022 Faculty of Tarbiyah and Keguruan at UIN Alauddin Makassar.

Based on the results of the linearity test (F test), there is a joint influence of visual learning styles and critical thinking on the learning outcomes of PAI students in the 2022 batch of Tarbiyah and Keguruan faculties at UIN Alauddin Makassar. This is based on the ANOVA test so that the Fcount value = 17.063 appears with a significance level of  $0.001 < 0.05$ . Then to see the extent to which this variable has an effect, it can be seen from the coefficient of determination (Adjusted R square) which is 0.396. This means that 36.9% of student learning

outcomes can be influenced by learning style variables and critical thinking. So that to improve higher learning outcomes, it is determined by other variables. When students' learning styles are accommodated and they are encouraged to develop critical thinking skills, their learning outcomes tend to be better. This is due to:

**Increased Understanding:** Students not only remember information, but also understand and apply it.

**Skill Development:** Students develop better learning skills, such as analytical, evaluative and problem-solving skills.

**Increased Motivation and Confidence:** Students are more confident and motivated because they feel supported in the learning process according to



their needs and abilities. (Kholid, 2021)

Thus, understanding and optimizing learning styles and critical thinking skills is very important to improve student learning outcomes.

### **Conclusion**

1. There is a significant influence between visual style on student learning outcomes as shown by the significance value of  $0.001 < 0.05$ . This can be interpreted that there is a significant influence between visual style on learning outcomes.

2. There is a significant influence between critical thinking on student learning outcomes with a significance value of  $0.001 < 0.05$ . This can be interpreted that there is a significant influence between critical thinking on

the learning outcomes of PAI students in the 2022 batch of the Faculty of Tarbiyah and Teacher Training at UIN Alauddin Makassar.

3. Visual learning style and critical thinking simultaneously affect the learning outcomes of PAI students in the 2022 batch of the Faculty of Tarbiyah and Keguruan at UIN Alauddin Makassar. This can be seen from the significance value of  $0.001 < 0.05$ .

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