

The Relationship Of The Use Of Learning Sources And Learning Styles To Learning Achievement In Graduate Stage Students

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ABSTRACT

Background: Learning achievement is an important achievement, influenced by external and internal factors. One of the external factors that influence is learning resources. Learning resources should provide reliable information so that it can be used as a reference in taking an action. If learning resources are not managed properly, it will provide information that cannot be trusted and has low accuracy. Internal factors that influence learning achievement are learning styles, because by knowing their learning styles, they will adapt to the learning process so that it is fast and easy to absorb information or lessons. This study aims to analyze the relationship between the use of learning resources and learning styles on student achievement in the Faculty of Medicine, Unimus. **Method:** The research design was analytical observational with a cross sectional approach. The research sample was FK UNIMUS students batch 2019 which was taken through the total sampling technique. The data used are cognitive values, learning resources and learning styles. The instrument used is a questionnaire of learning resources and VARK. Hypothesis test using chi square test. **Results:** From 140 respondents, 31.4% used learning videos as the most dominant learning resource. The most widely owned learning style by students is kinesthetic by 52.1%. Analysis result bivariate value obtained significant value between the use of learning resources with learning achievement ($p=0.039$) and learning style on learning achievement ($p=0.000$). **Conclusion:** There is a relationship between the use of learning resources and learning styles on student achievement of FK Unimus.

Keywords: Learning resources, learning styles, learning achievement

INTRODUCTION

Learning achievement in the field of education is one of the most important achievements.¹ According to Bloom in Rusmono, learning outcomes or learning achievements are changes in behavior that include three aspects, namely affective, cognitive, and psychomotor. Cognitive aspects in the form of remembering and thinking processes that take place in the brain so that they can determine the achievements that will be obtained by a person.²

External and internal are several factors that affect learning achievement. External factors are all things that individuals initially get from outside, including curriculum, teaching methods, relationships, disciplines, and learning

resources.³ Internal factors are everything that an individual initially gets from within himself, including physiological factors including health and body condition. , as well as physiological factors include interests, talents, intelligence, emotional, fatigue, and style in learning.⁴

Learning resources are one part of external factors where it can have an influence on learning achievement. Learning resources have the meaning of all resources that can be used alone or combined to achieve learning objectives, including data, people, and objects. Learning resources include news, messages, materials, tools, technology, and backgrounds that can be used individually or in combination.^{5,6} Learning resources in today's era have very diverse variations.⁷

Another study by Hutari Puji conducted on midwifery study program students showed the effect of using learning resources on learning achievement^{8,9}.

If viewed internally, the factor that is quite influential in learning achievement is learning style. Learning style is a characteristic of cognitive, effective, and psychosocial behavior that acts as a fairly stable indicator of how a person perceives, interacts, and responds to his learning environment. The application of learning style theory has resulted in many methods used to categorize learning styles, one of which is *visual, auditory, read/write, and kinesthetic* (VARK).¹⁰ The results of learning styles that can be found based on the VARK questionnaire include unimodal and multimodal. Research by Elly Rahmawati et al showed that there was a correlation between learning styles and the GPA of students at the Faculty of Medicine, University of Lampung.¹¹

Referring to the description previously explained, the researcher is interested in conducting research related to the relationship between the use of learning resources and learning styles on student achievement at the UNIMUS Faculty of Medicine.

METHOD

Quantitative research using analytic observation method with cross sectional approach. The purpose was to determine the relationship between the use of learning resources and learning styles on the learning achievement of FK Unimus students by collecting data from the sample at one time. This research was conducted in June 2022 at FK Unimus. The sample of this study was 2019 FK Unimus students obtained by total sampling with the inclusion criteria of students who were willing to cooperate with the research while the exclusion criteria were students who filled out the questionnaire incompletely. The research sample was obtained by

filling out a questionnaire by the 2019 class of 150 students, but only 140 students completed the questionnaire and met the inclusion criteria. The questionnaires applied in this study are the learning resource use questionnaire and the VARK questionnaire which have gone through validity and reliability tests at the University of Lampung. Based on the Cronbach's Alpha reliability test, the results were 0.876 and the validity test with a significance of 5% and $n = 30$, r -table 0.361, so it can be interpreted that the VARK questionnaire is valid and reliable.

RESULT

UNIVARIATE ANALYSIS

Table 1 Distribution by gender

Table 1 showing that male students totaled 39 people (27.9%) and female students totaled 101 people (72.1%).

Gender	N	%
Male	39	27.9
Female	101	72.1
Total	140	100

Table 2 Distribution based on Learning Resources

Learning Resources	n	%
Textbook	23	16,4
Ebook	19	13,6
Research journal	20	14,3
Powerpoint	16	11,4
Audio	14	10
Learning video	44	31,4
Online question bank	4	2,9
Total	140	100

Table 2 explained that the most widely used learning resources were learning videos with 44 people (31.4%), textbooks 23 people (16.4%), research journals 20 people (14.3%), Ebooks 19 people (13.6%), powerpoint 16 people (11.4%), audio 14 people (10%), and the

least used online question banks with 4 people (2.9%).

Table 3 Distribution by learning style

Learning style	n	%
Visual	3	2,1
Auditorik	24	17,1
Read/write	36	25,7
Kinestetik	73	52,1
Multimodal	4	2,9
Total	140	100

Table 3 explained that the learning style most used by students was kinesthetic 73 people (52.1%), followed by read/write 36 people (25.7%), auditory 24 people (17.1%), multimodal 4 people (2.9%), and the least visual with 3 people (2.1%).

Table 4 Distribution based on learning achievement

Learning achievement	n	%
Pass	112	80
Not pass	28	20
Total	140	100

Table 4 explained that students with the predicate of passing were 112 people (80%), while those who did not pass were 28 people (20%).

BIVARIATE ANALYSIS

Table 5 Learning Resources on Learning Achievement

Learning resources	Learning Achievement				P Value
	pass		Not pass		
	N	%	N	%	
Learning video	42	30	2	1,4	0,039
Textbook	17	12,1	6	4,3	
Research Journal	16	11,4	4	2,9	
Ebook	14	10	5	3,6	
Audio	11	7,9	3	2,1	

Powerpoint	9	6,4	7	5
Online question bank	3	2,1	1	0,7
Total	112	80	28	20

Table 5 showed that the results of bivariate analysis between the use of learning resources with learning achievement with the chi square test obtained a significant probability value (p) of 0.039 (p < 0.05). This finding indicates that the use of learning resources has a significant relationship with learning achievement.

Table 6 Learning Style on Learning Achievement

Learning styles	Learning achievement				P Value
	pass		Not pass		
	N	%	N	%	
Kinestetik	63	45	10	7,1	0,000
Read/write	25	17,9	11	7,9	
Auditorik	21	15	3	2,1	
Visual	3	2,1	0	0	
Multimodal	0	0	4	2,9	
Total	112	80	28	20	

Table 6 showed that the results of bivariate analysis between learning styles and learning achievement with the chi square test obtained a significant probability value (p) of 0.000 (p < 0.05). This finding indicates that learning style has a significant relationship with learning achievement.

DISCUSSION

Learning resources in the context of medical education have a vital role and position in the learning process. The results showed that of the 140 respondents, the learning resources most widely used by respondents were learning videos with a total of 44, followed by textbooks, research journals, ebooks, powerpoints, audio, and online question banks. In contrast, research conducted by Ali Al-Hazmi at

King Saud University in Riyadh, Saudi Arabia from 176 students showed that 85.8% of medical students used handouts, followed by the internet and textbooks.⁷

The bivariate test results show that there is a significant relationship between the use of learning resources on student learning achievement ($\rho = 0.039$). These results are in line with other research conducted by Hutari Puji on midwifery study program students showing that there is an effect of the use of learning resources on student learning achievement.⁸

Currently, universities use an adult learning system (andragogy) which requires students to be more active in finding learning resources or materials. Learning resources should provide reliable and accurate information so that it can be used as a reference in taking an action. If learning resources are not managed properly, they will provide information that cannot be trusted and has low accuracy.^{6,9}

Health-related professions often require the simultaneous use of sensory abilities such as visual (such as the ability to understand pictures and graphs in research articles), auditory (such as the ability to listen to patients or clients), reading/writing (such as the ability to read journal articles and take notes), and kinesthetic (such as the ability to move the body) (i.e. learning or performing physical examinations and procedures). Thus, learning theory knowledge can assist students in realizing and creating strategies to acquire these lasting professional abilities, in addition to improving their academic grades.¹²

Knowing how students learn is very important for teachers. This can help teachers find and solve students' learning problems so that learning is more efficient. Understanding students' different learning preferences also helps many teachers overcome the tendency to treat every student the same.¹²

Data from the research results, the learning style most widely owned by students is kinesthetic as many as 63 (45%). In line with the study conducted by Rahmawati E, Saputra O, Saftarina F where the results showed that respondents with kinesthetic learning styles had a percentage of 47.9%.¹¹ Similarly, in a study conducted by Ahisya et al at the Faculty of General Medicine, Malahayati University, respondents with kinesthetic learning styles amounted to 68 people (57.6%).¹ Based on the results of the bivariate test in this study, it was found that there was a significant relationship between learning styles and student achievement ($\rho = 0.000$). This finding is in line with research conducted by Hardiansyah in 2015, where there is a positive influence between learning styles on student academic achievement.¹²

The cross tabulation results indicate that respondents with kinesthetic learning styles dominate the pass category. This is in line with research conducted by Rahmawati E, Saputra O, Saftarina F, that respondents with a very satisfying category tend to have a kinesthetic learning style.¹¹ Research conducted by Lubis, Pertiwi, Batubara had different results, namely respondents who obtained satisfactory IP had a visual learning style. While auditory and kinesthetic produce a balanced number of one and three respondents, respectively.¹³ Process is more important for students who have kinesthetics as their learning style. When what is in the textbook is applied in daily practice, he understands the concept better. A student who uses a kinesthetic learning style must touch or imitate an object that has certain information to retain it.¹⁴

CONCLUSION

1. There is a significant relationship between the use of learning resources and the learning achievement of 2019 batch students.

2. There is a significant relationship between learning style and learning achievement of 2019 batch students.

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