

**Use of Learning Media Campus Wall Mural (Mudik) Toward Achievement at
Waste Management Subject of Students DIII Environmental Health
Departement of Health Polytechnic of Health Ministry in Yogyakarta 2016**

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ABSTRACT

Learning is a process of communication and takes place in a system, determines the success of learning is the development of instructional media. Intended use of instructional media is to provide an incentive for the students to follow the lectures so as to motivate students to further develop themselves during the lecture. Campus wall mural (MUDIK) is one of the media that is designed materials meeting lecture is usually given in the classical style of each meeting shall be made in the form of visual media such as painting a picture of murals on wall of campus and students will learn at each meeting about the matter of waste management to interpret the image in question. Problems of garbage and various efforts to resolve the problems in the field of waste will be visualized in the form of murals. Selection of learning media wall north campus of Health Polytechnic of Health Ministry in Yogyakarta, with consideration of the walls are quite spacious, with a condition that mossy / not clean, and to support the realization of an environmentally friendly campus (green campus). The method used in this study is quasi experiment with Pre-Post with Control Group Design. Variables of research were MUDIK learning media and achievement of students of waste management subjects as well as a confounding variable were initial values students and locations of campus. Data is analyzed by Mann Whitney test. The difference of Pre-test score between control and treatment groups obtained the value of P-value of 0.001 and sig (2-tailed) 0.591, P-value of 0.000 and sig (2-tailed) of 0.000 for the difference in value Post- test in the control group and the treatment group, P-value of 0.077 and sig (2-tailed) 0.805 for the difference in value Pre and Post in the control group as well as the P-value of 0.002 and sig (2-tailed) of 0.000 for the difference in value Pre and Post groups Treatment. There are significant differences between the groups using "MUDIK" upon learning of Waste Management with the groups using the lecture method of teaching. There is no difference between the pre and post in the control group. There is a difference between the values of pre and post in the treatment group. There is no difference between the pre in the control group and the treatment There is a difference between the value of a post on the control and treatment groups.

Keywords: Learning Media , Mural, MUDIK, Waste Management

INTRODUCTION

Learning is a process of communication and take place in a system. One factor of the critical success of learning is the development of instructional media. The use of interesting and fun learning media can help students to understand the material presented by the lecturers. It also aims to provide an incentive for the students to follow the lectures so as to motivate students to further develop themselves during the lecture. Learning media can provide a different atmosphere during the

process of learning so that students do not get bored in studying subjects that are being taught. The media types of learning can be classified into five groups of media-based human (teachers, instructors, playing the role and activity of the group), media-based visual (books, work tool, charts, maps, drawings, transparencies, slides), media based audio-visual (video, VCD, movies, tape slide programs, television) and computer-based media (computer-assisted instruction) The use of

computer assisted learning media influence to pull dayar students in learning competencies taught¹⁾. Lecturer must be able to choose one of the media that will be used in the learning process adapted to the material and learning objectives to be achieved.

The learning process is applied in the Environmental Health Department Health Polytechnic The Health Ministry of Yogyakarta using media audio, visual, and audio-visual media. Based on the preliminary survey conducted by researchers at September 2015 towards the use of a medium of learning in 10 subjects in the third semester of lectures 2014/2015 RPP compiled by reviewing each course lecturers mostly using visual media as indicated by the use of the LCD, with the lecture method lectures, class discussions, and practices that can be done in basic laboratory (chemistry, microbiology and parasitology), engineering laboratories, and field practices. Lecturers explain the lecture materials in the classroom in the form of a power point in laptops that display uses LCD, while the lecture material outside the classroom learning materials delivered in the form of lectures and group discussions.

Waste Management subject is one of the 10 courses that use visual media in the lecture where the material created by the lecturer in the form of power point and in the material contained pictures of waste. The learning process in the classroom, the students listened to the teachers about the waste material and look at the pictures in

the slide, followed by a discussion / question and answer. The results of initial studies conducted by researchers of the Waste management RPP (plan of learning) in the third semester D3 Environmental Health Department of Health polytechnic The Health Ministry of Yogyakarta, Waste Management teaching learning process about 60% of the material is given in the form of power point, and students tend to passively accept the material. The learning method for students tend to be boring, and may affect the achievement of students. This is reinforced by the results of the Middle Semester Exam (UTS) Students of Semester III DIII Environmental Health Department of Health Polytechnic of Yogyakarta 2014/2015, an average of 77.47 and needs to be an effort to increase the value of the average of the student, by doing repair of the learning process. One that needs to be addressed is the use of learning media.

Based on the above, the researchers are interested in doing research by applying learning media mural wall of campus, so hopefully achievement of students increased. Mural Wall of Campus (MUDIK) is one of the media that researchers design where the material meeting the lecture which is usually given in the classical style of each meeting shall be made in the form of visual media such as painting a picture of murals on walls of campus and students will learn at each meeting about the matter of waste management using the image in question. Problems of garbage and various efforts to resolve the

problems in the field of waste and visualized in the form of murals. Mural is how to paint or draw on the surface of a wall, a wall or a surface area that is permanent. The process of making, using media wall paint or paint wood paint or dye even anything like chalk or other device that can produce images. Visualization murals tend to occupy the space and sometimes high so necessary engineering perspective and distortion right²⁾. Selection of learning media wall north campus of Health Polytechnic of Health Ministry of Yogyakarta, with consideration of the walls are quite spacious, with a condition that mossy / not clean, and to support the realization of an environmentally friendly campus.

Formulation of the problem in this research is how much influence the media learned Mural Wall of Campus (MUDIK) toward the learning achievement of students at Waste Management subjects DIII Department of Environmental Health Health Polytechnic of Yogyakarta. The aim of the study was to know effect of the Mural Wall of Campus (MUDIK) toward learning achievement of Student DIII Environmental Health Department of Health Polytechnic Health Ministry of Yogyakarta.

METHOD

Research type used is quasy Experiment with Pre Post Test Control Group Design. The population in this study were all students Prodi D3 Department of Environmental Health Departement Health Polytechnic of Yogyakarta as many as 80 students (2 classes).

The sample in this study is part of student in the Environmental Health Department Health Polytechnic Health Ministry of Yogyakarta as many as 40 people, as a comparison (control group) in this study were mostly students at the Respati University of Yogyakarta who received Waste Management subject as many as 40 people. Sampling is taken by purposive sampling, with the criteria of students who receive pre-test value <65, a sample of 40 students.

The independent variables in this study were learning media MUDIK. The dependent variable is the achievement of students subjects waste management. Confounding variable is the initial value (pre) students and location of campus.

The instrument used in this study is a test. The instrument is in the form of questions pre test and post tes to measure student achievement which is exactly the same problem. This is due to investigate the improvement of student learning outcomes before and after different treatment between the two groups.

The results of data processing were analyzed descriptively and analytically to determine the effect of media use mural wall of campus (MUDIK). Statistical analysis of the test data distribution normality using Shapiro Wilk and found that the data is not normally distributed. After that to know the difference between the pre and post in each group, to know there are differences in the pre in the control group and the experimental as well as to know the difference of the post in the control group and the experimental use of the Mann Whitney test.

RESULTS

This study was conducted to determine the influence of Mural Wall of Campus (MUDIK) toward the learning achievement of the students DIII Environmental Health Department of the Ministry of Health Health Polytechnic of Yogyakarta at waste management subjects. The activity of research include the implementation of pre-test and post-test to determine students' achievement of the subjects taught. Research data can be illustrated by tables containing data on the value pretest control and experimental group in Table 1.

Table 1.
Number of Pre Test Respond Use of the Learning Media Mural Wall of Campus (MUDIK) toward the Learning Achievement Waste Management Subject

Variable	Control		Experiment	
	quantity	Percentase	quantit	Percentase
< 65	38	100%	38	100%
≥ 65	0	0%	0	0%
quantity	38	100%	38	100%
<i>P-value</i> Normalit as	0,001 (No Normal)			
Sig (2-tailed)	0.591 (Ho accepted dan Ha refused)			

Data Table 2. contains the value Pos test in the control group and the experimental.

Table 2.
Number of Post Test Respond Use of the Learning Media Mural Wall of Campus (MUDIK) toward the Learning Achievement Waste Management Subject

Variable	Control		Experiment	
	Σ	%	Σ	%
< 65	38	100%	19	50%
≥ 65	0	0%	19	50%
Control	38	100%	38	100%
<i>P-value</i> Normalitas	0,000 (no Normal)			
Sig (2-tailed)	0.000 (Ho refused and Ha accepted)			

Data Table 3 shows the results of the pretest and post test control group and the experimental group

Table 3.
Number of Pre Test and Post Test Respond Use of the Learning Media Mural Wall of Campus (MUDIK) toward the Learning Achievement Waste Management Subject

Variable	Control				Experiment			
	Pre		Post		Pre		Post	
	Σ	%	Σ	%	Σ	%	Σ	%
< 65	38	100	38	100	38	100	19	50%
≥ 65	0	0	0	0	0	0	19	50%
Jumlah	38	100	38	100	38	100	38	100%
<i>P-value</i> Normalit as	0,077 (Normal)				0,002 (no Normal)			
Sig (2-tailed)	0,805 accepted and Ha refused)				0.000 (Ho refused dan Ha accepted)			

The data in Table 3 normal distribution of data obtained in the control group to the treatment group and the data are not normally distributed data after the treatment in the test data normality using the Shapiro-Wilk on the results of the pretest and posttest respondents in the control group and the treatment group. While the relationship between the control group and the treatment group there are significant differences between the two groups.

DISCUSSION

Research about utilization learning media mural wall of campus (MUDIK) toward the learning achievement of waste management subject was held in June to August 2016. Selection of student respondents DIII Environmental Health Departement and Respati University of Yogyakarta because at the level of the respondents get subjects of waste management. Besides that selection of

respondents control is students from Respati University of Yogyakarta in order to properly control group completely unaffected by Mural Wall of campus on the north wall Health Polytechnic of Yogyakarta. The use of instructional media aims to facilitate the learning process, improve the efficiency of teaching and learning, maintain the relevance of the learning objectives and helps concentration of students in learning. The results showed there is a difference between the achievement of students in the subject of waste management using MUDIK media as well as students who do not use the media MUDIK. Academic achievement is one measure of the success or failure student after a learning activity in schools and to determine the level of success it is necessary to form test assessment³⁾. The test is a tool or procedure used to determine or measure something, by the way and rules - rules that have been set⁴⁾

Based on the results of the analysis showed that the use of media in teaching subjects MUDIK Waste Management who scored in the top 65 as much as 50%, while in the control group who did not use the media in learning MUDIK no scoring above 65 after the learning process. The use of a medium of learning by educators varied one using visual media to illustrate a point the subject of waste management in the walls of the campus where students always can see every student walking on campus side. The use of this medium is an aid educators in explaining the material relating to waste management. The use of learning media in accordance with

the concept of material to help students understand the course materials Waste Management given by lecturers.

Media is anything that can deliver the message or information learned from the teacher to the student, which can stimulate student interest or learners. In the implementation of defense-distance courses waste management should use the media to the smooth process of learning. Efforts educators subjects waste management by utilizing instructional media in teaching waste management will greatly assist the smooth teaching and learning can improve the quality of waste management subjects. Ability absorption of different learners - different power requires students to select appropriate learning media so that material can be accepted by learners.

In this study, researchers focused on the utilization of instructional media in the course of waste management at the Health Polytechnic Ministry of Health of Yogyakarta. The results of this study are expected to provide feedback on all educators to utilize instructional media delivered by educators to be well received by learners.

The use of instructional media on Solid Waste Management also helps students in solving emerging problems and learning Waste Management subject. The benefits of learning is a teaching medium will be quite vague so that it can be understood by students and allow students to better master the learning objectives⁴⁾. The use of instructional media in teaching and learning can arouse desire and

interest in the new addition to the motivational and stimulation of learning activities, and had an impact a psychological impact on learners. Media-based learning using visual media has proven there are significant and effective way to improve student achievement⁵⁾.

The results of the study are suitable with research by Rohmah (2011), showed a significant difference between the treatment group and the control group obtained results that by using media images in IPS learning can improve student learning outcomes⁶⁾. The use of instructional media on learning orientation will greatly help the liveliness of the learning process and delivery of messages as well as learning content at the time of the material submitted. Media Learning biggest influence to the senses and better able to ensure understanding, people are listening alone is not the same level of understanding and long endure what is understood is also different when compared with those who view or view and listen to content directly.

The learning achievement is the ability of students in achieving high thinking. Learning achievement has three aspects: the cognitive and psychomotor affective. The learning achievement is the results achieved as well - good student in the learning process. The learning achievement is influenced by several factors, there are two factors that affect the internal factors and external factors. Where external factors that could affect one of which is a method of teaching educators at the time of the material.

In the experimental group, the intervention is done by using MUDIK as student learning media. Overview materials waste management subject as outlined in MUDIK contain about 7 (seven) aspects of waste management, namely the problem of waste and the impact of waste is not managed, waste management, waste management model in Indonesia, kind of waste management, recycling cork and plastics , composting and community participation in waste management. The material is poured on the walls of the campus to be drawn so as to attract students to look after the reading so that students can see a visualization of waste management contained in the community through MUDIK. In the process of learning useful as a media renderer stimulus (information, attitude and others) as well as increase the harmony in the reception of information. In terms of - certain things media useful for organizing steps progress and provide feedback. The use of instructional media in teaching and learning can generate motivation and stimulation of learning activities and bring a psychological impact on students.

Based on these descriptions, we can know that the use of learning media is a very important factor to improve the achievement of students in the learning process, because the learning media is a tool that is very supportive in the development of science possessed an educator. So that the campus should pay attention to and provide a complete learning media for the learning process in the classroom and outside the classroom to be effective. It caused

that students are more motivated to learn if the lesson is explained by giving examples of images accompanied by one of them poured with MUDIK. Through these examples MUDIK students easier to understand the material when compared to listening to lectures, so that students easily answer every question that was given right at the time of the test. Lessons are also longer embedded in the memory of students.

CONCLUSION

There are significant differences between the groups using "MUDIK" upon learning Waste Management subject with the group that did not use the method MUDIK in improving learning achievement.

RECOMENDATION

Suggested for lecturer of Waste Management subject to use methods of visual MUDIK in teaching and learning process to improve learning achievement students of Environmental Health Department of Health Polytechnic of Health Ministry in Yogyakarta.

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