EXAMINING THE IMPACT OF USING LEARNING MEDIA ON STUDENTS' LEARNING MOTIVATION AND LEARNING OUTCOMES

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Article info	Abstract
	This research aims to examine the influence of the use of learning media on students' learning motivation and learning outcomes in creative economics courses at an education department of one university in Indonesia. The research was carried out employing a quantitative approach with descriptive research methods. The population of this research is undergraduate students from three classes (2019 -2021 cohorts) at this department with a total population of 232 students. They were selected using the *Simple Random Sampling method* so that the number of samples taken was 70 students. Data were collected using a questionnaire which was distributed to respondents via the Google Form. Data analysis was carried out using regression analysis with the path analysis method to test the research hypothesis. This study found that: 1) the use of learning media has a positive effect on students' learning motivation; 2) learning motivation has a positive effect on students' learning outcomes; 3) the use of learning media has a positive effect on students' learning outcomes (with learning motivation as a mediator). These findings imply that the use of learning media is highly recommended for improving students' learning outcomes. This influence becomes greater when learning motivation is used as a mediator. This study also shows that learning motivation acts as an intermediary between the use of learning media and students' outcomes.

INTRODUCTION

Several essential issues need to be taken into account by related stakeholders in the national education system in the 21st century. One of them is the complex challenge of preparing quality human resources (HR) that are able to compete in the more globalised era. Education in the future needs to focus on developing students' potential so that they can face and solve complex problems in their lives. This includes an ability to have a higher-order thinking such as critical thinking skills and creativity.

To achieve this goal, teachers need to adjust the learning process in the classroom. Basically, the learning process is a teaching communication process. Media is very important in this process because it can help clarify the material presented and simplify complex material so that students understand it more easily. Media can also overcome teachers' limitations in conveying information and help concretize abstract material. Moreover, media provides a dynamic and interactive learning experience that engages students on multiple sensory levels. Visual aids, such as videos, diagrams, and animations, enhance comprehension by catering to diverse learning styles. Auditory learners benefit from podcasts, lectures, or interactive discussions facilitated by various media platforms.

Choosing the right learning media can help students improve their learning skills and abilities because of several benefits, including increasing students' motivation and interest in learning as well as providing similarities in observations and perceptions. According to research conducted by Audie (2019), learning media can help teachers provide learning material interactively to their students and can also make learning time more efficient. The use of learning media can also increase students' desire to learn. It gets more abstract, more abstract, and reading is the high point. Reading has a memory capacity of ten per cent while role-playing and going out into the field have a memory capacity of ninety percent because students go directly to the field.

In addition, Ermi et al. (2022) found that mobile applications, computer simulations, and technology-based learning media improved student learning outcomes. This shows that the use of technology-based learning media positively impacts student learning outcomes. Diana (2022) suggests that using interactive media and multimedia improved student learning outcomes; This research also found that learning motivation acts as a mediator in the relationship between the use of learning media and learning outcomes. Learning media increases students' motivation to learn, which in turn improves their learning outcomes.

The research above shows that the use of learning media can improve learning outcomes and improves learning quality. However, it is important to remember that learning motivation is not the only factor that influences student learning outcomes. Other factors,

such as students' cognitive abilities, their learning environment, and social support, may also influence their learning outcomes.

According to data collected from the department where this study is situated, the quality of student learning outcomes in the People's and Creative Economics course at the faculty was very good academically, but the final score was rather low. Only 16 students, or around 45% of the total students, got a minimum grade of B, while the other 55% got a grade below B. Therefore, the use of learning media such as audio, visual and audio media must be used. According to Aini and Situmorang (2021), even though all types of learning media can be applied to theoretical, practical and assignment methods courses, there are still very few teaching staff who want to use a variety of learning media in their lectures. This is because there are obstacles faced by educators and students in using appropriate learning media in delivering the material, both internal and external obstacles.

Thus, choosing the right learning media, as well as the creativity and skills of educators in using learning media are important factors in increasing student learning motivation and creating optimal student learning outcomes. Based on the background described above, the researchers are interested in conducting further research regarding "The Effect of Using Learning Media Towards Students Motivation and Learning Outcomes in Students of the Economics Education Study Program at the university under investigation.

METHODS

Research Design

This research is descriptive research which aims to describe observational data. Researchers use a quantitative approach that emphasizes obtaining original data.

Settings and Participants

The population in this study were undergraduate students from the 2019, 2020 and 2021 classes majoring in Accounting and Cooperatives, Economics Education Study Program who actively participated in learning using learning media in the Creative Economy course. Researchers used *Simple Random Sampling* as a sampling method. This method was carried out by taking samples randomly without paying attention to strata (levels) in the existing population (Riduwan, 2020). The sample size used with an error ratewofw10% is calculated using Slovin formula, namely:

$$n = N / (1 + (N \text{ xe}^2))$$

So, the number of economic education students who were respondents was 70 students.

Data Collection Methods and Analysis

Data from this study were collected using a questionnaire which was distributed directly to the relevant respondents. The written statements were given directly to the respondents via the *Google link.* The link was sent via the *WhatsApp application.* Data analysis was done by testing the hypothesis using the path analysis *method.* Apart from carrying out regression analysis using the path analysis method, researchers also used descriptive analysis to understand and analyze the data by describing and illustrating the data that has been collected.
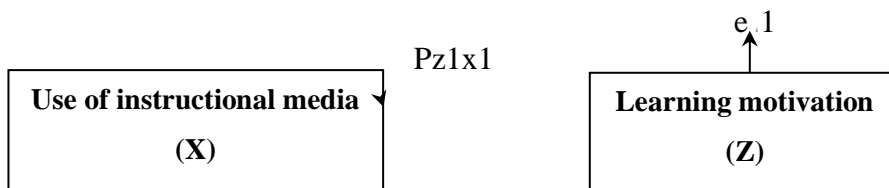
FINDINGS AND DISCUSSION

Findings

A. Structure Testing I

The path analysis model in sub-structure 1 can be described and formulated with a structural equation as in the following figure:

Figure 1
Sub-Structure Relationship between the Influence of the Learning Media Utilization variable (X) and Learning Motivation (Z).

Regression Equations

From the results of data processing for sub structure 1, the Coefficients table and Summary table show the influence of variable X (Utilization of Learning Media) on the intervening variable (Learning Motivation) as follows:

Table 1

Results of Regression Equation Path Analysis for Substructure I

Coefficients					
Model	Unstandardized Coefficients		Standardized d Coefficients	T	Sig.
	B	Std. E error	Bei ta		
1 (Constant))	6.025	2.247		2.682	.009
Utilization The use of learning media	.277	.036	.678	7.608	.000
a. Dei					
b. Dependent variable: Learning Motivation					
Model Summary [b]					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.678 [a]	.460	.452	4.46571	
a. Predictors: (Constant), the use of learning media					
b. Dependent Variable: learning : motivation					
Source:: Primary data processed,,2023:					

From the result of the path analysis calculation above, the first error value (e1) can be calculated as follows:

$$e_1 = \sqrt{1 - R^2} = \sqrt{1 - 0.460} = 0.735$$

The result of 0.735 indicates that around 73.5 % of the variation in the variable use of learning media is not explained in the model and not taken into account to influence the learning motivation variable,

Results of Sub-Structure I

From Table 1. Results of Substructure Regression Equation Path Analysis 1 can be conveyed as follows:

 a) Simultaneous Test (F Test)
Simultaneous testing was not carried out on the first structure because there is only 1 independent variable in this model. Simultaneous testing is only carried out if the model contains more than 1 independent variable.
 b) Individual Influence Test (t-Test)
From the data listed in Table 1, the calculated t-value was 7.608 and the significance was 0.000. Know the t table value (1- sided test at alpha 5%) with the equation:
T table   = n – k – 1: alpha
                = 70 – 1 – 1: 0.05a

$$= 68 : 0.05$$
$$= 1.668$$

Thus, the results obtained are t count (7. 608) > t table (1. 668) or significance (0.000) < alpha (0.05). It can be interpreted that the use of learning media has a significant effect on learning motivation.
Structure Path Equation 1:
$$Z = \rho\, zx\, X + \rho\, z_1 \varepsilon_1$$
$$Z = 0.678\, X + 0.735\, \varepsilon_1$$

The meaning of the regression equation above is:
- The path coefficient value for the learning media utilization variable was 0.678. This means that for every increase in the use of learning media by 1 unit, learning motivation will increase by 0.678 and vice-versa.
- The standard error ($\varepsilon 1$) is 0.735. This means that the error coefficient for other variables outside research that influence learning motivation is 0.735.

The first hypothesis which states "There is a significant influence of the use of learning media on learning motivation" is accepted or proven.

c) Coefficient of Determination Test (R2)
Based on Table 1. in the Summary table, it can be seen that the coefficient of multiple determination (adjusted R^2) is 0.460. These results can be interpreted as meaning that 46% of students learning motivation is influenced by the independent variable which consists of the use of learning media. Meanwhile, the remaining 54% is influenced by other variables not included in the research model.

B. Structure Submission II
The path analysis model in sub-structure 2 can be described and formulated with a structural equation as in the following figure:

Figure 2
Sub-Structure Relationships Influence of the variables Use of Learning Media (X), Learning Motivation (Z) and learning outcomes (Y)
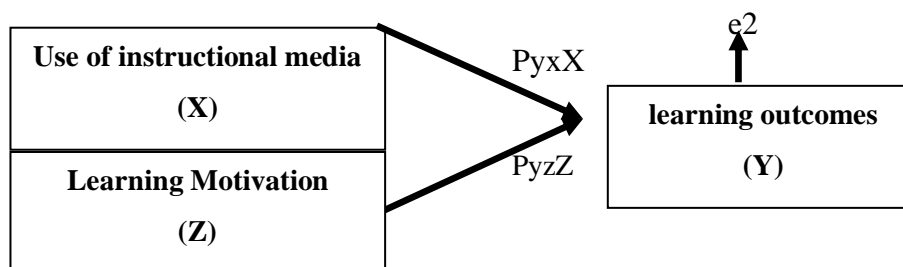
Figure 2. The structure of the regression equation can be arranged as follows::
$$Y = \rho y_x X + \rho y_z Z + \rho y\varepsilon_2$$

Regression Equations

The results of data processing for sub-structure 2 obtained the Anova table, Coefficients and Summary table of the influence of variable X (Utilization of Learning Media) on the intervening variable (Learning Motivation) as follows:

Table 2
Results of Path Analysis of Substructural Regression Equations II

AANOVA [a]						
Model		Sum of Squares	Df	Mean Square	F'	.Sig.
1	Regression	1392.818	2	696.409	30.541	.000 [b]
	Residual	1527.767	67	22.802		
	Total	2920.586	69			
a. Dependent Variable: Learning Outcomes						
b. Predictors: (Constant), Learning Motivation, the Use of Learning Media						

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	Q	Sig.
		B	Std. Error	Beta		
1	(Constant)	57.694	2.526		22.838	.000
	Utilization of Learning Media	.131	.053	.297	2.471	.016
	Learning Motivation	.489	.130	.454	3.774	.000
a. Dependent Variable: Learning Outcomes						

Model Summary [b]				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.691 [a]	.477	.461	4.77520
a. Predictors: (Constant), Learning Motivation, Use of Learning Media				
b. Dependent Variable: Learning Outcomes				

From the results of the path analysis calculation above, the second error value (e2) can be calculated as follows:
$$e_2 = \sqrt{1 - R^2} = \sqrt{1 - 0{,}477} = 0{,}723$$
A result of 0.723 means that the number of variable variants in the use of learning media and learning motivation which are not examined in the model and which influence the learning outcome variables is 0.723. This fairly high *error* value gives the conclusion that

it is not only the use of learning media and learning motivation that influences learning outcomes but there are several other variables that influence learning outcomes.

Results of Sub-Structure II

From Table 2, the Results of Substructural Regression Equation Path Analysis II, the following findings can be conveyed:

a) **Simultaneous Test (F Test) and Coefficient of Determination (R2)**

To test the influence of independent variables simultaneously on the dependent variable, the F statistical test is used. The F test is carried out to determine whether all independent variables jointly influence the dependent variable. From Anova Table 2, the calculated value is 30.541 with a significance of 0.000. Meanwhile, the F table value is at a significance of 5% with equation:

F table = n – k – 1 ; k
$\qquad$ = 70 – 2 – 1 ; 2
$\qquad$ = 67 ; 2
$\qquad$ = 3.134

Note : $\qquad$ n : number of samples
$\qquad$ k : number of independent variables
$\qquad$ 1 : constant

Thus, the results obtained are F count (30.541)n> F table (3.134) or significance (0.000)n< 0.05. It can be seen that the use of learning media and learning motivation together have a significant effect on learning outcomes.

Based on the summary of Table 2, it can be seen that the coefficient of multiple determination (adjusted R^2) is 0.477. The results can be interpreted meaning that 47.7 % of learning outcomes are influenced by the use of learning media and learning motivation. Meanwhile, the remaining 52.3% was influenced by other variables not included in the research model.

b) **Individual Influence Test (t-Test)**

The Influence of Learning Motivation on Learning Outcomes Structure Path Equation 2

$$Y = \rho yXX + \rho yzZ + \rho y\varepsilon 2$$
$$Y = 0.297X + 0.454Z + 0.723\varepsilon 2$$

The meaning of the regression equation above is:

- The regression coefficient value for the variable utilization of learning media was obtained at 0.297. This means that for every increase in the use of learning media by 1 unit, learning outcomes will increase by 0.297 and vice versa.
- The regression coefficient value for the learning motivation variable was 0.454. This means that for every increase in learning motivation by 1 unit, learning outcomes will increase by 0.454 and vice versa.
- The standard error ($\varepsilon 1$) is 0.723. This means that the error coefficient for other variables outside research that influence learning outcomes is 0.723.

Following the data, it can be justified that the second hypothesis which states that "learning motivation has a positive effect on student learning outcomes" is accepted or proven.

**The Effect of Using Learning Media on Learning Outcomes**

Data from Table 2 also shows that the calculated t value is obtained on the variable of utilization of learning media. The results obtained are t (2, 471) > t table (1, 668) or significance (0.0 16) < alpha (0.05). It can be interpreted that the use of learning media has a significant effect on learning outcomes. In the Structural Path 2 equation, the regression coefficient value for the learning media utilization variable is 0.29 7. This means that for every increase in learning media utilization by 1 unit, learning outcomes will increase by 0.2 9 7 and vice versa. Following the data, it be concluded that the third hypothesis of this study which states "The use of learning media has a positive effect on student learning outcomes (with learning motivation as a mediator)" is accepted or proven.

C. Direct and Indirect Influence

Based on the results of structure 1 and structure 2, the path analysis model in sub-structure 1 and sub-structure 2 can be described as follows:

Figure 3
Results of Path Analysis between X, Z and Y

$e_1 =$

$e_2=$
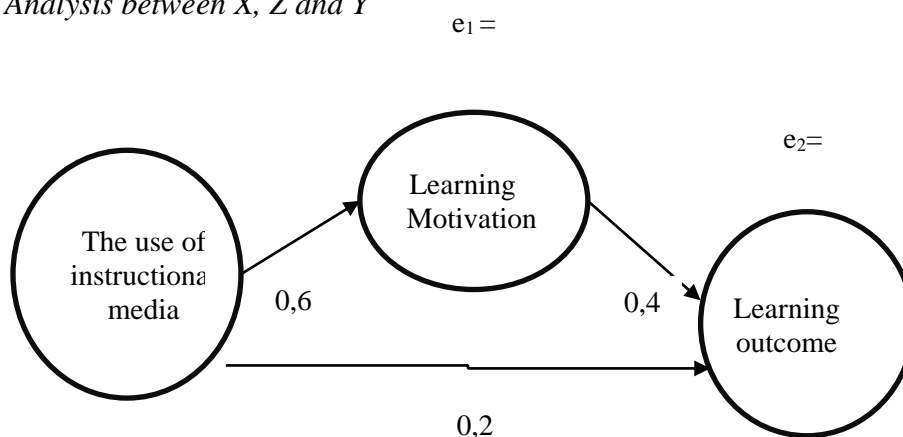
Based on Figure 3. The direct indirect effects of each variable can be arranged in the following table:

Table 3
Direct and Indirect Effects

Influence	Direct	Indirect	Total Influence	Category
Utilization of Learning Media → Learning Motivation	0 , 678	-	0 , 678	Strong
Utilization of Learning Media → Learning Outcomes	0.297	0.678 x 0.454 = 0.308 –	0.605	Strong
Learning Motivation → Learning Outcomes	0.454	-	0.454	Strong

Source: Primary data processed, 2023

Based on Tablen3, the results of the direct influence of the use of learning media on learning outcomes are 0.297 with an indirect influence through learning motivation of 0.308. Thus, it is known that the indirect effect is greater than the direct effect (0.308 > 0.297). This means that although the use of learning media has a significant direct influence on student learning outcomes, this influence is greater when it is through the mediator of learning motivation. This shows that learning motivation acts as an intermediary between the use of learning media and student learning outcomes.

In other words, effective learning media can increase learning motivation, which ultimately has a positive impact on student learning outcomes. These findings provide a deeper understanding of the mechanism of influence of the use of learning media on student learning outcomes. Educational institutions and teachers can use this information to develop more effective strategies in designing and implementing learning media that can maximize student learning motivation, thereby improving their learning outcomes.

Discussion

According to research, students prefer to learn using learning media, especially audio-visual media. To improve creative economy learning outcomes, the use of audio-visual media must include the following: 1) Access facilities to ensure that students can easily access audio-visual materials through online learning platforms, digital libraries, or online service facilities. They may need instruction on how to use and maximize the benefits of the material, 3) Evaluation of the Effectiveness of the Learning Media which may involve

surveys, tests, or other measurements to determine the extent to which the media helps students learn better, and 4) Ongoing adjustments based on the evaluation, ready to make adjustments and improvements to audio-visual learning media such as content updates, technical improvements, and adjustments based on student comments.

After research, it is known that the use of learning media has a significant influence on the desire to learn. Previous research by Audie (2019) supports the results of this research that learning media can help educators provide learning material interactively to their students and streamline learning time. The use of learning media can also increase students' desire to learn. Researchers found after conducting research that choosing the right media or props for the material will be very important to help improve student understanding. Learning through audio-visual media has developed along with advances in science and technology. Subsequent developments require innovations such as the use of animated films, Android applications for creative economy learning materials, and many other interactive media needed for online and offline learning so that students do not get bored or get bored.

After research, it is known that the use of learning media has a significant influence on learning outcomes. Research by Ermi Sola et al (2022) on how the use of technology-based learning media such as mobile applications and computer simulations improves student learning outcomes. The results of the essays distributed by the researchers show that the audio-visual method is a learning medium that is preferred by students. Apart from that, the audio-visual learning approach in question uses technology such as sound pictures and sound videos.

With the mediator of learning motivation, the use of learning media has a significant influence on student learning outcomes. The learning motivation variable has a role as a link to the indirect influence of learning media on learning outcomes in this research. Previous research by Diana et al (2022) supports this research, where they found that using interactive and multimedia learning media improved student learning outcomes. This study also found that learning motivation functions as a mediator in this relationship. Researchers found that learning motivation influences the extent to which learning media can contribute to student learning outcomes. By implementing interesting learning, the motivation in question is not only audio-visual learning media but also the overall driving force within the student. By conducting interesting learning, students can find ways to direct their learning activities to achieve lesson objectives. To improve student learning outcomes, the development of teaching strategies that use effective learning media must be combined with efforts to provide the best motivation to students.

The research above shows that the use of learning media with motivational variables can further improve student learning outcomes. However, learning motivation is not the only component that influences student achievement. Factors not addressed in this study, such as cognitive abilities, social support, and learning environment, may also influence how

students learn. These factors can also play a role in ensuring students get the best learning outcomes.

To increase students' learning motivation, educators should use audio-visual media in their lessons and choose appropriate materials to present to them. This is because audio-visual media can not only increase students' learning motivation but can also make the material easier for students to understand and remember. By choosing the right teaching media, educators will more easily convey information to students.

The results of the research show that the Faculty of Education and Science at the University of Riau must support and provide facilities for lecturers to use innovative and interactive learning media to improve the quality and motivation of student learning. Lecturers are expected to be able to use various types of learning media, such as simulations, videos, or e-learning platforms, to increase student engagement and quality of learning.

CONCLUSION

After using audio-visual learning media, learning produces higher learning scores compared to learning before using audio-visual learning media. When students feel interested and involved in learning media, they tend to be more motivated to study certain topics and try to achieve good learning outcomes. Therefore, by optimizing the use of audio-visual learning media, we can achieve better learning outcomes. The research results show that the use of learning media has a significant influence on student learning outcomes with the presence of learning motivation mediators, meaning that good and relevant learning media can motivate students to learn more actively and be involved in the learning process.

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