

Effectiveness of Economic Comics as a Learning Media on Economic Lesson

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ABSTRACT

A Learning process in the 21st century requires innovative and creative learning. Learning process requires teachers to provide learning media that attract student motivation. Learning media innovation improves student's learning motivation. However, if the learning media tends to be boring, student's learning motivation will decrease and have an impact on their learning outcomes. This study aims to determine the effectiveness of economic comics as a learning media for economic subjects. The research design was quasi-experimental approach with non equivalent group design method. There are two types of classes, namely the experimental class and the control class. Each class is treated differently. In experimental class, student use economic comics as a learning media, while the control class does not use comics. In this study's, data collection method used primary data in the form of pre-test and post-test. Data analysis techniques used T-test to compare the pre-test and post-test scores of the two classes. The results of this study are: 1) there was a difference in the gain score between the control class and the experimental class; 2) the post test value of students from the experimental class is higher than the control class. From the results of the study, it can be concluded that economic comics are effectively used as learning media. .

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1. INTRODUCTION

Economic learning aims to help students understand how to apply economics principles to their daily lives. The scope of general economic learning can be divided into two, namely: microeconomics and macroeconomics. In microeconomics students learn about the concept of economic, how market interactions occur, and how economic principles apply. In macroeconomics students studies economics in a wider scope than microeconomics scope. Material about unemployment, inflation, international trade to government policies became topics studied by students. The discussion of economic learning

is quite complex because it begins with the discussion of microeconomics and then continues with macroeconomics. In line with these objectives, economic learning is an important topic to learn.

In order for economic learning to be more attractive, teachers are required to be creative and innovative in using learning media. The use of comic-based learning media became popular in the 2000s. However, rarely studies have discussed further about the use of comic media. Research on comics has been conducted in the field of health. Muzumdar (2016) stated that comics are a creative way to teach and learn about illness, patient experiences, and other topics. In addition, comics can also be used as learning media. There are several studies that have examined the use of comics in certain subjects. Research conducted by Yaman (2010) stated that teaching students with caricatures can improve language skills, motivate students, and increase student participation in class when compared to classes taught using conventional methods.

Other research in the history subjects is conducted by Srinivasalu (2016) which states that teaching via cartoon is effective in remedying misconception. This is in line with the results of research conducted by Zhang (2012) entitled "Developing Animated Cartoons for Economic Teaching". In his study, Zhang (2012) stated that cartoon animation can help students to understand and remember material in the long run and can reduce misconceptions. Subsequent research related to cartoon media was carried out by Wyk (2011) involving 68 students where all students used cartoon media as their learning media. The results of his research show that student interest in learning activities is increasing. O'Roark (2017) in his paper entitled "Super-Economics Man! Using Superheroes to Teach Economics examines the use of superhero characters as a medium for teaching Economics. Superhero stories that are lifted from comic books are associated with economic material such as scarcity, opportunity costs, specialization, production functions, and duopoly.

From the explanation above, it is known that learning media based on comic has several benefits, including; increase student learning motivation, reduce the possibility of misconceptions, and improve student learning outcomes. So, researchers are interested in implementing comic based learning media to overcome the problems that exist in SMAN 1 Batu. The problem that arose in this high school is that student's interest in learning is low and the average score of students is less than the required standard. In one class, only about 10% of students have fulfilled the passing grade while other students still haven't.

Comparison of classes is important to do, in order to measure the effectiveness of comics. Therefore, researchers are interested in studying more about the effectiveness of comics as a learning medium in economic subjects. Economic comic media is designed slightly different from other comics. Content and storylines from comics are developed by researchers themselves. The contents of comics are related to money and banking. The material is packaged into a meaningful story accompanied by supporting images so students can understand the material and reduce the possibility of misconceptions.

2. METHODS

Research Design

The design of the research was a quasi-experimental research with non equivalent group design method. Thyer (2015) mentioned that quasi-experimental research is research conducted by manipulating or applying differences treatment that aim to determine the effect of treatment on research subjects. Quasi-experimental research was conducted to compare the results of the two groups given different treatments. In order to facilitate the selection of research subjects, the non equivalent group design method was used. With this method, before being given a different treatment, both types of groups were given a pre-test. After the pre-test, the two groups were given different treatments and then given a post-test at the end of the learning session. The table below is given us details of the research design:

Table 1. Research Design

Experimental class	O ₁	X	O ₂
Control class	O ₃		O ₄

From the table above, there are five symbols to interpret research design. O₁ is results of the experimental class pre-test; X is treatment for experimental class which using comics as learning media; and O₂ is experimental class post-test results. In control class, O₃ is pre-test results; and O₄ is control class post-test result. The influence of different treatments can be symbolized by:

$$(O_2-O_1) - (O_4-O_3)$$

Participants

The subjects of the research amounted to 50 students of X grade from SMAN 1 Batu divided into 2 groups. The first group is called a control class consisting of 25 people and the second group is called an experimental class consisting of 25 people. Both of these classes were given different treatment. In the experimental class, students use comics as learning media while in the control class students do not use comic learning media.

Instrument

There were two types of instruments used in this study, namely evaluation test and questionnaires. The evaluation test developed by researchers consisting of 20 multiple choice questions. The purpose of this test is to measure the level of student's knowledge, while the questionnaire used to determine students' responses to comic learning media. There are 20 statement items in the questionnaire developed by the researcher. Assessment of questionnaires used a Likert scale consisting of 1-5. 1 to state very disagree and 5 to state strongly agree.

Procedure

The study was conducted for four weeks to discuss material about money and banking. In the first week, researcher explained about how to use comics and research flow. Then, researcher gave pre-test session for the control class and experimental class. The purpose of the pre-test is to find out the students' initial abilities before receiving a different treatment.

The second week, researchers began teaching experimental classes and control classes, the material discussed was about money. In the experimental class, researcher used comics as learning media and combined with the think pair share method. After studying the contents of the comics, students were asked to discuss their thoughts with their friend. While in the control class, researcher used conventional methods. This treatment was carried out until the third meeting, but in the third meeting the focus was on discussing material about Banking, while the procedures for teaching and treatment of the two classes remained the same as the second week.

Finally, in the fourth week, researchers gave post test for students. The purpose of the post test is to find out the final ability of students after being given a different treatment. In addition, the post test also serves to determine whether there is a difference in the gain score of the two classes.

Data Collection Technique

Data collection techniques used primary data, consist of questionnaires and evaluation test. Questionnaire aims to determine the percentage of student interest in the comic economy learning media so that questionnaire only distributed to students in the experimental class, while the evaluation test are in the form of pre test and post test, given to all students in the control class and experimental class. The purpose of giving pre-test and post-test questions is to find out the initial ability and final ability of students after being given a different treatment.

Data Analysis Technique

Data derived from the questionnaire were analyzed quantitatively by calculating the average response of each option from the respondent. There are 20 statement items in the questionnaire, the total score respond divided by the maximum score. Then the percentage of respondents' interest in economic comics will be known. The pre test and post test questions consist of 20 multiple choice questions, if the students answer correctly they will get 5 points, so that the maximum score that can

be achieved if all the questions are answered correctly are 100 points. The results of the pre test, post test and gain score were analyzed using T-test, then the T value is used as the basis for determining whether the hypothesis is accepted or rejected.

3. FINDINGS AND DISCUSSION

In this section, the results of the data analysis are interpreted with the help of the SPSS 16.00 program. Data analysis was carried out using the T-test. The data interpreted is the result of the T value of the pre-test and post-test values between the control class and the experimental class. The decision making condition is if the significance value of T-test is <0.05 , the hypothesis is accepted, and if the significance value is >0.05 , the hypothesis is rejected.

Table 2. Comparison of pre-test values between control class and experimental class

No.	Group	Tests	N	Minimum	Maximum	Mean	Sd	T value
1.	Control	Pretest	25	45	75	61,15	7,11445	0,302
2.	Experimental	Pretest	25	40	75	59,00	7,63763	0,303

From the pre-test data, it is known that T value of the control class is $0.302 > 0.05$ and T value in experimental class $0.302 > 0.05$. Both classes show T value >0.05 , so it can be concluded that there is no difference in the results of the pre-test between the control class and the experimental class. The level of student's ability is considered equal. The next step is comparing the post-test values of the two classes.

Table 3. Comparison of post-test between control class and the experimental class

No.	Group	Tests	N	Minimum	Maximum	Mean	Sd	T value
1.	Control	Posttest	25	65	85	74,42	5,31901	0,000
2.	Experimental	Posttest	25	75	100	82,80	5,41603	

From the table above, we can be seen that the value of T value is $0.000 < 0.05$, and in accordance with the rules to take conclusions, it can be concluded that T value $000 < 0.05$ which means that there is a difference in the post-test results between the control class and the experimental class. If we examine further, the average value between the two groups also has a difference. The average value of the experimental class is higher than the control class. The gain score of each class is different. Calculation of the gain score is obtained from the difference between the pre-test and post-test scores. Based on the table above, the gain score for the control class is 13.27 while the gain score from the experimental class is 23.8 points. So it can be concluded that the experimental class gain score is greater than the control class. The increasing of post-test and gain score is due to the use of comics as a learning media can increase student motivation. As stated by Marianthi (2016) that comics can motivating students to capture and maintain their interests and can improve students ability to analytical thinking and critical thinking. In other field, Piaw^[5] stated that the content based humorous cartoon increased reading rate, comprehension and reading motivation at the student teachers. So, it can be concluded that using comic as learning media effective to increased student's achievement.

This is in line with the results of the questionnaire which distributed to students in the experimental class. Of the 15 people from 25 students or about 82.72% of students thought that economic comics were very interesting, helped them understand the material, and encouraged the spirit of learning.

4. CONCLUSION

Teaching Economics subjects give challenges for teacher to make an interactive learning process. This encourages teachers to improve their creativity in preparing learning media that can increase student's learning interest. There are many learning media that can be develop, one of the popular

media is comics. The media began to be known by the public since the 2000s. But its use as a learning media still very limited.

The initial purpose of this study was to determine the effectiveness of comics if used as a learning media. The study was conducted by involving two classes, namely control class and experimental class. The control class is used as a comparison class. The different treatment between two classes shows different results. Evident from the post-test value of the experimental class is better than the control class, thus it can be concluded that the use of comics as a learning media has proven effective..

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