



Classroom Action Research Journal 3(2) (2019) 1-8

Classroom Action Research Journal

<http://journal2.um.ac.id/index.php/carjo>



Development of Economic E-Module on Money and Banking Material For Student

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DOI: 10.17977/um013v3i22019p001

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History Article

Received 19 April 2019

Approved 23 May 2019

Published 7 June 2019

Keywords

*Developing, Economics
E-Module, Money and
Banking*

Abstract

This research was implemented because of the burnout and boredom Economics students to receive lessons because teachers only use the lecture method without any other study variation and only rely on one textbook as a source of learning. Besides, many students are reluctant to read the textbook because the book is less interesting and too many posts. SMA Negeri 1 Panggul Trenggalek have been had some enough electronic facilities, but it not used optimally by the teachers in the learning process. The E-Module research and development model used is ADDIE model with five steps, that is analysis, design, development, implementation, and evaluation. In the development of this Economics E-Module involves the validation of material expert and media experts from Economics professors and lecturers who are competent in the learning media. Besides, the subject of a trial in this research is all students in Tenth Grade A that about 32 students. The result of the research and validation of material expert and media expert shows that the Economics E-Module on Money and Banking Material is fit for use. Based on the result of the pre-test and post-test that was given to students before and after using the Economic E-Module indicates that E-Module is effectively used to improve the students learning outcomes.

How to Cite

Lestari, N. W. E. (2019). Development of Economic E-Module on Money and Banking Material for Student. *Classroom Action Research Journal*, 3(1), 1-7.

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e-ISSN 2598-4195

INTRODUCTION

The development and progress of information technology are very fast in this century bring effect on education progress especially in Indonesia. The world of Education procured to always follow the plot of information technology development what is more advanced to be created harmony for technology progress what is unavoidable more. Development of science and technology more to push effort renewal in the utilization of technology results in the learning process. With the utilization of information technology in the education world, it is expected will create a learning activity that active, creative, and competitive more.

Associated with modernization and technology advances at this time, many innovations can be applied in the learning activity, one of them is with utilization E-learning system. E-learning consists of two-part, which stands for E or Electronic, and learning which means learning. So, E-Learning is a learning process with the use of help from electronic devices especially computer devices. E-Learning systems offer audio-visual media that interact with the learning process. Besides, make students more interesting to study, the visual effect can help teachers as educators to tell information for students. Arsyad (2002:30) suggests that teaching with audio-visual media is the production and using the material the absorption through sight and hearing and not all depends on the understanding of word or symbol-symbol that same. Therefore, interactive audio-visual media can make it easier and increase the level of effectiveness on the learning system, where students can access material in detail.

On teaching and learning activities in the class, the teacher just should be a facilitator, while the students must independent study and build their science so that they can easy to understand the material. Interactive Audio-visual media usage has been adopted by many educational institutions but not distributed overall. Conventional learning activity in the class can not be abandoned, but the teacher must giving innovative learning variation-variation so that students can be active more and creative. One of them is E-Module usage or better known with Electronic Module as an alternative material of lesson and interactive learning media.

E-module or electronic module dating component that exists in conventional modules(print). The module itself is a learning medium that contains material, methods, boundary contains, and how to evaluate the systematically designed and interesting the expected objectives following the level of complexity Munir(2011:7) define Emodul as one of the individual learning media that is the same as the learning module in general, but Emodul is provided in electronic form by involving computer-based media. If viewed from an economic point of view, the electronic module is more efficient because it requires fewer production costs for printing and duplication.

The economy is one of the subjects in the field of social science that studies human activities related to the process of production, distribution, and consumption of a good or service. Understanding complex economies would not be enough if only relying on a source of learning alone, let alone limited to an explanation from an economies teacher. Moreover, not all schools have to learn about resources or teaching materials for an adequate economic lesson. The utilization of current technological developments with the use of electronic modules in the teaching and learning process can be an alternative teaching material that can be used in school and independent learning for learners.

SMAN 1 Palang Trenggalek is one of the leading schools in the palang sub-district, trenggalek district. This school's address is in Jln Panglima Sudirman 87 Panggul-Trenggalek. Based on initial observations, the selection of SMAN 1 Panggul because it is still not optimally utilized technological developments that exist today at the school. Internet access and the provision of learning in the classroom, so that learners feel quickly bored and less active. Plus, the existing package of books is still inadequate to meet the needs of students who comprised several classes to gain additional knowledge.

METHOD

Methods and models of developments of economic e-model as learning resources adopt addie model (analysis-design-development-implementation-evaluation). The use of ADDIE Models in the ADDIE model is simple and easy to learn and its structure is systematic.

This product trial is carried out by the material expert, media experts, and students. Material experts on the development of economic module done by Dr. Imam Mukhlis, SE.M.Si as a lecturer of Malang State University, and Drs. Supardi as a teacher of SMAN 1 Panggul Trenggalek. While the media experts are done by Drs. Achmad Ali Wafa, M.Si as a lecturer of Malang State University who are competent in the field of media and instructional design field trials were conducted on all students of class X A in SMAN 1 Panggul, amounting to 32 students.

The data collection instrument used in the development of the economic module is questionnaires and tests of learning outcomes. The questionnaire used using a Likert scale with criteria 4 if e-module good and decent, scale 3 if e-module good enough and decent enough, scale 2 if e-module is less good and not enough, and scale 1 if E-module very not better and not enough to use. Questionnaires are used to collect the review results by material experts, media experts, students. The types of data obtained from this study are quantitative data from the percentage of questionnaire results and qualitative data from critiques and suggestions from the material experts, ah in and students, pre-test results of multiple-choice form materials to measure students' understanding of using E-Module Economics. Students are said to succeed if the value on test and test has been in SMA 1 Trenggalek, which is 74. The data has been collected and then analyzed by quantitative analysis of questionnaire scores and test learning results by using the normality test, paired-sample t-test, and test score to gain validated test subjects.

Problem pre-test and post-test to be given on also done first in the validation class. In addition to using the validation test, know the reliability test, test different power problems and the level of difficult questions for the feasibility test of pre-test and post-test as a test tool of learning outcomes, Based on the validity of the results obtained that the pre and post matter amounted to 20 questions as a whole valid with the criterion of r result count r table (0.349). Meanwhile, the reliability test obtained Cronbach's alpha value of 0.907 0.6 so that the pre-test and post-test have been reliable and can be used at the time of field testing On the calculation of power differences about pre-test and post-test obtained 1 problem with criteria very good and 19 questions with good criteria. While on the level of difficulty of the problem, obtained the result that the whole problem of pre test and post-test in criteria is not too easy and not too difficult, Based on the test results about pre-test and post-test

can be concluded that the problem is appropriate to be used as an instrument of data collection of learning results students.

RESULTS AND DISCUSSION

After validation of the material experts and experts conducted on the students. We try E Module that has been developed implemented in February to March 2015 to all students A in SMA State Panggul Trenggalek. The results of tests that have been conducted on expert materials, experts, and (field test) obtained quantitative data and qualitative data Quantitative data is data obtained from the assessment of closed-circuit experts. The aspect of E-Module assessment for material experts is reviewed from the aspect. (1) Presentation of materials, 2) Feedback, and 3) trial question (evaluation).

Table 1 Average Percentage Of The Material Experts

Number	Rated aspect	Average of percentage	Validation criteria	declaration
1.	Presentation of material	86,11 %	good	Don't need revision
2.	feedback	81.25%	good	Don't need revision
3.	Trial question (evaluation)	84,3%	good	Don't need revision
	Average amount	85%	good	Don't need revision

Source: Authors (2019)

Validation result is doing by material expert get an average percentage of product feasibility about 85% with a description like this : (1) material presentation aspect about 86,11%, (2) feedback aspect with feasibility percentage about 81,25%, and (3) trial question (evaluation) aspect with feasibility percentage about 84,38%.

Aspect of the assessment of instructional media for media specialists in terms of (1) attention material, (2) material presentation, (3) interactivity, and (4) practice questions (evaluation).

Table 2 Average Percentage of Media Validation

Number	The assessed aspect	Percentage point	The criterion of validity	Of interest
1.	the attention material	89,29%	worthy	No need for revision
2.	the presentation of material	100%	worthy	No need for revision
3.	interactivity	87,5%	feasible	No need for revision
4.	practice question (evaluation)	100%	worthy	No need revision
	Average number	92,65%	feasible	No need revision

Source: Authors (2019)

Validation to media experts has been done for 2 times due to revision product presentation feasibility of media validation results before revision is 72,37 after making product revision the average percentage of product feasibility of material expert is 92,65 and some aspect, that is the material of attention attachment of feasibility percentage 89,29, presentation percentage of material presentation aspect is 100% the percentage feasibility of the interactivity aspect of 87,5 and the percentage of feasibility aspect of the exercise question (evaluation) of 100%.

After validating and evaluating the economic E-module by two material experts and media experts, the E-module product trials were tested in the field trials. The result of the E-MODULE economic product test on money metrics and banking were obtained from various aspect consisting of 1 aspect of the material of attraction 2 presentations of the material 3 feedback 4 question exercises (evaluation) 5 and effectiveness this field trial was conducted on 32 X A class student in SMA Negeri 1 Panggul with the intent to assess the attractiveness and of economic E-module on money and banking materials.

Table 3 Average Percentage of Field Trials

No	The assessed aspect	Percentage point	The criterion of validity	Of interest
1.	The attention material	89,08%	worthy	No need revision
2.	The presentation of material	89,71%	worthy	No need revision
3.	feedback	89,85%	worthy	No need revision
4.	interactivity	91,08%	worthy	No need revision
5.	Practice question (evaluation)	92,71%	worthy	No need revision
6.	interactivity	91,60%	worthy	No need revision
	Average number	90,29%	Feasible	No need revision

Source: Authors (2019)

Through field trials conducted on 32 remaining class x A in SMA Negeri 1 Panggul, obtained the average percentage of product attractiveness E-module economy of 90,29 with descriptions of various aspects, among others, from the aspect of the attention of the percentage feasibility appropriateness of 89,08 the percentage of feasibility aspects of material presentation feedback 89,71, the percentage of feedback aspects of 89,85, the percentage of eligibility aspects of exercise (evaluation) of 92,71, and the feasibility presentation 91,60

Furthermore, to measure student learning outcomes before and after using the E-module economy, given the problem pre-test at the beginning of the meeting to know the initial knowledge of the students on the material that will be delivered in the post-test at the end of the meeting. After the assessment, there is an increase in student learning outcomes before and after using E-module economy the post-test score of the student as a whole has reached the minimum passing criteria (KKM) economic subjects that have been determined the SMA Negeri 1 Panggul that is equal to 74 with the highest value is ninety-five at the time of the post-test and the

lowest score is fifty on the pre-test. In general, the entire pre-test score of students is still below the criteria maximum mastery, although there is almost reached the maximum material criteria. It is because the students have not received the material learning that will be delivered. After obtaining learning by using the E-module economy, students learning outcomes increase in the pre-test.

From the pre-test and post-test scores of students it can be seen that the average percentage of the average value level is 41,73%. Their percent with the average increase of pre-test results from 58,28 to 82,34 at the post-test value. By looking at student learning outcomes on the pre-test and post-test that is by the maximum exhaustibility criteria in the state high school 1 Panggul so that learning activities using the E-module economic good to apply.

Based on the table on the validation results by the material experts, obtained the calculation of the percentage of eligibility of 85% with the qualification feasible to use so it can be stated that the material. While it is based on data analysis from media experts obtained the result that media experts declare E-module. This economy is feasible to be used with a feasibility percentage of 92,65%. whereas based on the table of field trials of 32 X A students in public SMA 1 Panggul, two students state that economic E-module is very attractive with a 90,29% eligibility feasible percentage, so it can be concluded that E-module economic is very feasible to use as teaching materials and learning media in the classroom and self-teaching for students.

The result of the pre-test and post-test scores of the student were analyzed by using normality tests, paired-sample T-tests, and gain score tests. The normality test is a test requirement to see what variables studied normal distribution or not. To test the normality of pre-test and post-test self-used Kolmogorov Smirnov test. One requirement of a normally distributed data is the sig value of more than a zero point zero lim. Based on the normality test using SPSS 17 for windows (two-tailed) on the pre-test data shows (a) significant value of $0,327 > 0,05$, whereas in the post-test data indicates (a) significant value of $0,132 > 0,05$. The data concluded that the data on the pre-test and post-test values are normally distributed.

In addition to using the normality test is also used paired sample T-test to determine whether there is a difference between two related samples, namely to determine whether there is a difference between the results of learning before using E-module economy (pre-test) and learning outcomes after using E-economic module (post-test). After giving pre-test and post-test is analyzed by paired sample T-test with SPSS 17 for windows with the following conditions:

1. If the significant (sig) $> 0,05$, then there is no difference in learning outcomes in the pre-test and post-test.
2. If the significant (sig) $< 0,05$, then there are differences in learning outcomes in the pre-test and post-test.

Based on paired sample t-test experiment with SPSS 17 for Windows help, pre-test and post-test score in Sig (2-tailed) shows a significance value of $0,000 < 0,05$ it mean that found a difference in learning outcomes between the value of pre-test and post-test students. Therefore, based on the result shown by using E-Module economics a teaching material and learning media in teaching and learning activities are very effective to increase student learning outcomes, it can be concluded that E-Module economic already to use and can increase learning outcomes.

Gain score use to know the level of effectiveness E-Module Economics on material money and bank by analyzing the results of pre-test and post-test questions. Based on the pre-test and post-test outcomes, can be known average pre-test outcomes amount to 58,28, while the average post-pest outcomes are 82,34 with a maximum score of 95. After doing the calculation by gain score formula, the result obtained $0.75 > 0,7$. So it can be concluded that learning by E-Module Economics in learning activity very effectively to improve student learning outcomes.

CONCLUSION

Based on the result and discussion, got the conclusion that presented succeeding like E-Module Economics that developed has an advantage over the general economic print module, besides more efficient to cost and time, E-Module Economics more interactive with students so that learning in the classroom can be more active and effective.

After validating by material and media experts, data needs to process and analyzed using descriptive percentage analysis. Based on analysis result data from media expert, material expert and field trials by using descriptive percentage analysis obtained results that E-Module Economic product proper to use for students and other users with the average percentage of material feasibility percentage of material expert validation of 85% average percentage of media eligibility from media expert validation of 92,65% and an average percentage of media eligibility from 32 students obtained an eligibility percentage of 90,29%.

As a success measuring instrument using E- Module Economics as a learning resource then does a pre-test and post-test to students. Based on material validation results, media validation and validation of product trials obtained an average percentage of eligibility of 89%. With that eligibility, the percentage can be concluded that E- Module Economics is valid and worthy to use. Other than that, based on normal test results obtained that both of the data pre-test and post-test results have normally distributed. While in paired sample tests with using SPSS 17 for Windows obtained data that a different study learning outcomes between before use E- Module Economic and after using use E- Module Economics. In pre-test and post-test result analyzing with using the gain score, obtained g score 0,75 that mean if learning with using use E- Module Economic very effective and proven to improve students learning outcomes.

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