Development of Economics Modules of Material That Are Difficult to Understand for Students of the Economics Study Program, of Universitas Negeri Medan, Indonesia 2023

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Abstract. Learning has been carried out online so far, which has an impact on limited access to quality cost-effective teaching materials This research aims to produce teaching materials in the form of good modules and suitable for use in the classroom learning process. This research is an experimental and developmental research conducted in the Economics study program of the Faculty of Economics of Medan State University in the academic year 2022/2023, and a sample of 30 experimental class students and 30 control class students. To verify if the developed module is effectively used, experiments were carried out in two classes, after tests with different tests, it was concluded that there were positive differences in the learning results between the experimental classes and the control classes, so that it can be concluded that the developed modules are effectively used in the learning process of the students of the Economics course at Unimed.

Keywords: Development, Module, Hard to understand.

1 Introduction

1.1.Background to the problem

In the economic material, in addition to the essential material, there is also the economic material that is difficult for students to understand, which includes material that is not only learning theory, but also material that is mathematical calculation, as in learning the material economy of demand and supply, elasticity, markets, costs, inflation, economic growth and other materials that are loaded with calculations, and not only theoretical, but also analytical. Thus, it can be said that to learn demand and supply and other materials are not only memorization, but also graphics, and mathematics that require the precision and skill of students in reasoning and analyzing problems. Generally, students consider economics classes as easy and routine lessons, but different in the material mentioned above. Basic demand and

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supply skills and others are difficult materials, especially in drawing curves, shifting demand/supply curves, and analyzing changes in demand/supply curves.

With a good educational process, a person can understand many useful things that make a person not experience difficulties in life. Education cannot be separated from the teaching and learning process, as education is used to produce good human resources through the learning process. In learning activities, there are sometimes students who have difficulty achieving predetermined competency standards and basic competencies. In general, the learning difficulties faced by students are not only in natural disciplines, but more than that. Social disciplines also sometimes bring difficulties to students, such as economics disciplines, especially in subjects that require calculus. For some students, the calculated material is often difficult, because the level of difficulty in learning it is higher than other social sciences that do not have mathematical analysis, because the material is related to numbers that require high precision.

This research usually discusses economic material, especially about material that is difficult to understand among students, that is, material that requires special knowledge and tenacity in dividing it, because it requires calculations and analysis and interpretation of the numbers produced to be translated into economic meaning (mining economy), therefore, this subject is considered by most students as a difficult subject. This is because many students already consider that the calculated material is a difficult subject, so some students are lazy to learn it. But it can also be caused by the way the teacher/lecturer delivers the taught material is less interesting, so students are lazy to follow it.

This work is attempted, one of which is to expand the understudy's learning freedom by having effectively open modules. As per Nurhayati (2011, p. 61) "learning freedom is a functioning learning action driven by the expectation or rationale of dominating a capability to defeat an issue, worked with the information or skill had, both in deciding the learning time, spot of learning, speed of learning, strategy for learning, and assessment of learning performed by the student himself".

The modules of the economics course have been compiled by many authors, but specific modules on hard-to-understand material are still very minimal, for this the author is interested in studying more deeply about it. In addition, it is also expected that the development of this module will be aligned with the concept of course assignments of the University. In essence, module development can ideally make it easier for students to acquire knowledge and also make it easier for teachers to teach, assign tasks and assess student learning outcomes. For this reason, the development of this module will also be adjusted to the curricular design adopted at Unimed, namely the KKNI with the characteristics of 6 tasks, namely routine tasks, journal reviews, CBR, mini research, projects and engineering ideas. This will certainly homogenize the information, knowledge and concepts of the task, so as to make life easier for teachers and students.

According to this background, it is very necessary to develop an economics module on hard-to-understand material as an effort to improve student learning outcomes, the central point of which in this research is the realization of a module as didactic material according to the demands of the KKNI, which is designed in terms of helping students and high school students as a solution in forming the independence of these students

1.2. Formulation of the problem

The existence of modules that were previously made without going through a series of relevant research is the central problem in this regard. For this, it is necessary a didactic material in the form of a module developed through a research (R &D), according to the rules that apply at the University of Negrei Medan. From this series of research processes, it is expected that this module will be able and relevant to equip students to improve their academic quality, in the form of improving learning outcomes and learning independence. In order for this study to focus more on the problem of difficulties in terms of economic material, the researcher defines the formulation of the problem as; "Is the economics module on elusive material effective for use in student lectures?"

1.3. Research Objectives

According to what was explained earlier, and in order for this research to be more focused, it is determined what the objectives of this research are; "To find out if the economics module in elusive material is effective for use in student lectures?".

2 Research Methods

This examination is planned as innovative work (research and development). Upon fruition of this exploration, it is wanted to make a learning module on monetary material that is hard to comprehend, and from this examination, it is normal to create discoveries connected with the subsequent item. At that point, in view of these outcomes, upgrades will be made as assessment material, and until at last the item meets the necessities of all perspectives that are ignored.

2.1. Data analysis

A module will be of good quality on the off chance that it has been tried both as far as legitimacy, reasonableness, and viability, which can be depicted as follows:

Test viability. This test is done to determine whether the subsequent module is simple, lucid, and not troublesome as far as use until the rules of learning, productivity, and time adequacy are met. The viability test was performed by testing two classes for both the exploratory class and the control class, as well as the pre- and post-test, in the trial class utilizing modules, while in the control class without the utilization of modules.

3 Results Of Research And Discussion

The elaboration and improvement of monetary modules on this subtle material depend on a successive series as per the setting of the issues looked at by every understudy corresponding to the point examined, as indicated by the creator's experience while learning at the college level as well as at the center level, and in light of the sharing of other showing companions, particularly what obstructions they face during classes, particularly to investigate significant issues connected with fundamental financial material, both reasonably and hypothetically. What is input for the creator to make a decent module as per the prerequisites, and the outcomes can assist understudies with working on their presentation?.

3.1. Learning outcomes

To know the learning results of the understudies, a numerous decision trial of up to 50 inquiries was directed to assess the viability of the modules created, successful or not, which should be visible from the learning results of 30 understudies for each class to be tried with various tests. In Table 1, we can see the learning results of the understudies involving the financial aspects module in the exploratory class and without the utilization of the module in the control class.

Table 1. Learning Outcomes of Students of Experimental and Control Classes in the Economics course

Value	**Catagory**	**Number of students**			
		Experiment Class		**Control Class**	
		Number	**Percentages**	**Number**	**Percentages**
90-100	Very good	12	40 %	5	17%
80-89	Good	15	50 %	16	53%
70-79	Sufficient	3	10 %	9	30%
< 69	Less	0	0	0	0
	Total	30	100%	30	100%
Total	30	100%	30	100%	

Source: data processing

Based on the data in Table 1 above, the scores of the students of the experimental class who used the didactic material of the module were higher than the scores of the students of the control class, in the range of grades of 90-100 the experimental class obtained a very high score of 40%, while the control class was only 17%, the range of values 80-89 experimental classes was 15% while the control class was 53%, and in the range of values 70-79 the experimental class decreased by only 3 people, while the control class is still very high, of 30%.

3.2 Evaluation

The evaluation is carried out at each stage of the development of the economic module by the researchers, the evaluation is carried out to obtain answers and contributions, and then revisions are made in the developed modules. In the implementation phase, an evaluation related to the test results of the developed module is performed. The assessment is carried out to determine students' responses and learning outcomes after the use of modules that aim to determine the value of the effectiveness of the modules developed.

3.3 Analyze grade data obtained by students using modules

To analyze student learning outcomes, an experimental survey was conducted with students using experimental classes and control classes with a total of 30 students each, as seen from the learning outcomes after using the module. The mean score, standard deviation, highest score and lowest score obtained by the students for both classes appear in table 2

Table 2. Student Post-test Score Results Data

Class	Avarage	Standard Deveation	Highes Value	Lowes Value
Control	83	5,25	91	74
Expriment	87	5,02	95	75

Source: data processing

As indicated by table 2 above, it tends to be seen that the consequences of the assessments of the understudies of the control class got a typical score of 83 and a standard deviation of 5.25, with the most noteworthy score of 91 and the least score of 74. While the mean worth utilizing modules (Trials) is 87 and the standard deviation is 5.02, with the most noteworthy worth being 95 and the least worth being 75, From the table, it very well may be seen that the normal score of understudies who utilize the module is higher than the typical score of understudies who don't utilize the module. In this manner, it very well may be reasoned that the normal monetary learning results of trial class understudies are higher than the center control class.

3.4 Normality test

In view of the consequences of the ordinariness test performed to confirm whether the information is regularly disseminated, The ordinariness test in this review, utilizing information from the Lilifors Test procedure, is pronounced typical if the T_hit < T_tab esteem is at a huge degree of 0.05. The aftereffects of the information from the ordinariness trial of the understudies of the exploratory class and of the control class can be introduced in the accompanying table:

Table 3. F-Test: Two-Sample For Variances

Description	*Expriment*	*Control*
Mean	87,00000000	83,33333333
Variance	25,24137931	27,59655172
Observations	30	30
Df	29	29
F	1,076589746	
P(F<=f) one-tail	0,341565546	
F Critical one-tail	1,804481608	

Source: data processing

Based on table 3 above, it can be observed that both the data of the control class and the data of the values of the experimental class present T-count values lower than T_tabel. For the control class T-hit 0.097234 and T-tab 0.14932, while for experimental T-hit 0.101365 and T_tabel 0.14932. Thus, it can be concluded that the results of the examination of the control class and the experimental class are normally distributed.

3.5 Test the difference between two means

The next step is to see if this module is effective or not, then a difference test is performed from the average duya to see that there are differences in the learning outcomes of the two

classes where the control class without using modules and experimental classes using modules, performed using different tests (t-tests). Use a baseline such as the following:

1.If the score is > ttab, it is concluded that there are differences in the learning outcomes of the two classes

2.If the score is < ttab, it is concluded that there is no difference in the learning outcomes of the two classes.

In summary, the results of the hypothesis test calculation are listed in Table 4 below

Table 4. F-Test: Two-Sample Assuming Equal Variances

Description	*Expriment*	*Control*
Mean	87,00000000	83,33333333
Variance	25,24137931	27,59655172
Observations	30	30
Pooled Variance	28,43678543	
Hypothesized Mean Difference	0	
Df	61	
t Stat	2,246732786	
P(T<=t) one-tail	0,016583915	
t Critical one-tail	1,669013025	
P(T<=t) two-tail	0,026877831	
t Critical two-tail	1,997729654	

Source: data processing

In view of the aftereffects of the t-test computation, in Table 4, information was acquired that the estimation > ttable or 2.246732786 > 1.997729654, or, at the end of the day, the speculation is acknowledged. It very well may be reasoned that the learning results of exploratory class understudies in financial matters courses in financial aspects concentrate on programs utilizing modules are fundamentally higher than the scores of understudies educated without utilizing modules.

3.6 Discussion

The consequences of this study are in accordance with what has been finished by past specialists. As per Yuliana, in her examination entitled Improvement of intuitive computerized showing materials with a context-oriented way to deal with microeconomic hypothesis courses, she expressed, in light of the assessment of showing material items that were completed by a group of specialists, The outcomes were that in the material viewpoint it got a score of 82% with the class Excellent, in the media angle it got a score of 83.3% with the class Excellent, and in the language viewpoint it got a score of 81% with the class Excellent. In this way, it very well may be reasoned that the computerized pedantic materials created are legitimate, doable, and functional to be utilized in the educational experience. Quantitative exploration directed by Anton Nasrullah, in the diary Symetri, with the semi-exploratory

strategy, the examination configuration utilized is the non-comparable benchmark group plan: giving two unique medicines to two gatherings, for example, the trial class (Edmodo) and the control class (ordinary). Quantitative strategies for information assortment and investigation utilize ordinariness tests, homogeneity tests, comparability trials of two methods, and t-tests. The aftereffects of the review are: 1) learning financial arithmetic utilizing Edmodo is more viable (trial) than learning without utilizing Edmodo (ordinary); 2) understudies who study utilizing Edmodo have an uplifting outlook towards learning financial science.

In addition, research conducted by Wulan Sari in the Journal of Economic Education, the results showed that the E-modules developed were more attractive, more efficient, and more effective. The attractiveness of module E is seen from the results of the student response questionnaire, the level of efficiency of module E is known from the results of interviews with teachers and students, while the effectiveness of module E is seen from the increase in student learning outcomes known from the pre- and post-test scores. The conclusion of this development research is that the developed E-modules are more attractive, more efficient, and more effective compared to the previously used modules. Similarly, the research conducted by Winarni in the journal Social Studies, research design using R&D. Learning development design follows in the footsteps of Dick and Carey. To determine the efficacy of the product, the Experimental Test of the Pre-Test-Post Model (Control Group Design) is performed. The development results can be concluded: (1) The results of the evaluation of material experts, design experts, students, and teachers of products can be considered suitable for use (2) Based on the results of product testing, it can be said that effective modules are used to improve student competence. Effectiveness was tested using the t-test, obtaining a calculated t-coefficient higher than the t-coefficient in the table (3.759>1.997), declaring that learning from the introductory economics module was more effective. Meanwhile, research conducted by Arwansyah, in the British Journal of Earth Science Research (BJESR), concluded that the results of the effectiveness of teaching materials using modules were seen from the average score of the students in the experimental class, which was 86.33, while the control class got a value of 83.3. The results of the T-Test analysis for independent samples were obtained on the silai sig.2-tailed which calculates stable > or 2.251897244 > 1.997729654, it can be concluded that the learning outcomes of students of the economics study program using modules are higher than the scores of students taught without using modules. Thus, the developed modules are effectively used in learning activities.

3 Conclusion

Based on the formulation of the problem, objectives, results and discussion of the research development of proposed modules, it can be concluded as follows:

1.The results of the effectiveness of the didactic materials using modules can be seen from the average score of the students of the experimental class, which is 87, while the control class obtained a value of 83.3.

2.The results of the analysis of the T-Test for independent samples were obtained n ilai sig.2-tailed which calculates stable > or 2.246732786 > 1.997729654, it can be concluded that the learning outcomes of the students of the economics study program using modules are higher

than the scores of the students taught without using modules. Thus, the developed modules are effectively used in the learning activities.

3.8 Suggestions

Based on the results of the study, the conclusions of this research and development, there are several suggestions from the researchers, including:

1.It is hoped that this materials economy module will be used in the learning process and can help students understand the learning material and be able to open up students' insights into good learning.

2.It is expected that the application of research products in economic modules of difficult understanding will be used as a reference for research in the development of didactic materials and can be maximized in the process of economic learning.

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