

## The Development of Constructivist-Based Economic Module to Improve The Students' Learning Outcome In Private Senior High Schools In Kupang City

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### ABSTRACT

This research aimed to analyze the development of constructivist-based economic module and to analyze the effectiveness of constructivist-based economic module to improve the learning outcome of Private Senior High Schools in Kupang. This research and development employed Borg and Gall's with modification consisting of 8 stages: Preliminary research and information gathering, Planning, Prototype development, Small-scale trial, Product Revision, Product use trial, Finished product revision, Operational field trial. Data analysis used was a descriptive analysis, module feasibility analysis based on scale score and learning outcome test analysis using t-test. Development product is trialed using formative evaluation including: reviews by an economic material expert, media expert, linguists, practitioners, and small-scale trial, and large-scale trial. The result of research showed that constructivist-based economic module has been developed successfully using up to date learning material, referring to active learning with constructivist learning syntax to improve the students' learning outcome; in addition, constructivist-based economic module has been proved for its effectiveness to improve the students' learning outcome based on the significant result of t-test ( $0.000 < 0.0005$ ). It can be concluded that constructivist-based economic module developed had been proved for effectiveness in improving the students' learning outcome in private senior high schools of Kupang City.

**Keywords:** *Economic Module; Constructivist; Learning Outcome*

### INTRODUCTION

The data of National Education Standards (BSNP) related to the national competence achievement of Economics subject at Public High School and Private High School in Kupang National Examination data of Economics in Kupang academic year of 2014-2015 can be seen in Table I

Based on Table I the average grade of Economics National Examination of Private High School in Kupang has not reach 55 yet. Based on the regulation of Education and Culture Minister of Republic of Indonesia number 57 of 2015 paragraph 7 verse 1d, about the assessment of learning outcomes through National Examination, the assessment of learning outcome by educational unit through school examination/ madrasah/ equivalence education at SMP / MTS or equivalent and sma / ma / smk or equivalent, according to the result of observation conducted on Private Senior High Schools in Kupang on March 2016, the author found that economic learning is still monotonous and teacher-oriented, the students' motivation in attending the learning is

still low, as indicated with their less enthusiasm in attending the learning, while that motivation is very important in learning process. It is also confirmed by David Palmer [1] stating that motivation is recognized as an important factor in knowledge development.

TABLE I. THE AVERAGE GRADE OF ECONOMICS NATIONAL EXAMINATION AT PRIVATE HIGH SCHOOL IN KUPANG

No	Schools	Economics Grade
1	Giovani Catholic High School Kupang	48.71
2	Seminary St.Private High School Rafael	46.11
3	Mercusuar Christian High School	41.85
4	Sudirman Private High School Kupang	41.54
5	Christian High School 2 Kupang	39.82
6	PGRI Private High School Kupang	33.59
7	Ki Hadjar Dewantoro High School	31.9
8	Muhammadiyah High School Kupang	31.11
9	Sint Carolus Catholic High School	30.25
10	Christian High School 1 Kupang	29.86
11	Plus Olahraga High School Nusa Timor	26.91
12	Eltari Private high School Kupang	26.03
13	Tunas Harapan Private High School	24.25
14	Beringin Private High School Kupang	23.67

Source: The Ministry of Culture and Education 2014-2015

In addition to the students' low motivation, teacher faces some problems: limited teaching material and limited learning media existing. The teaching material used by teachers still derives from module and old student work sheet that can elaborate a number of materials so that the students can memorize a number of materials only. Learning method still uses conventional method that only transfer knowledge from teacher to students, so that it can lead to the students' low learning motivation in economic subject. It is in line with Khalid & Azeem [2] suggesting that the conventional method is teacher-oriented and impacts on the mental level of student interest.

Meanwhile, the students find difficulty in understanding the learning material as the teacher only conveys theory with lecturing method without examples and media that can facilitate the students understanding the learning; in addition the students cannot learn independently because the limited learning source that can be accessed by students. It impacts on the students' learning achievement as indicated with many students obtaining score below KKM (Minimum Passing Criteria) of 75: 11 out of 30 students (36.6%) achieve score above KKM and 19 (63.4%) achieve score below KKM in SMA PGRI Kupang, 14 out of 30 students (46.6%) achieve score above KKM and 16 (53.4%) achieve score below KKM in SMA Kristen 1 Kupang, and 11 out of 25 students (44 %) achieve score above KKM and 14 (56%) achieve score below KKM in SMA Kristen.

One of solution that can be taken to deal with the problem elaborated above is to use more effective teaching material that can stimulate the students' economic learning interest or motivation, and can facilitate the students to understand the material and help them learn independently. One of teaching material that can be used is economic learning module that can stimulate the students to build the knowledge owned and can train the students thinking critically, and participating actively in learning. Daryanto [3] states that module is one of teaching material forms packaged comprehensively and

systematically, containing a series of learning experience planned and designed to help the students master the specific learning objective. Furthermore, Dimopoulos, Stefanos, Pantis [4] explains that module can also improve the students' cognitive ability thereby impacting on the learning outcome.

Economic module that can stimulate the students to build knowledge they have and to practice their critical thinking actively in learning process is the constructivist-based module. Ismail, Marinus Barra' Tandiyuk, Baharuddin Paloloang [5] and Sukayasa [6] explain that the module with constructivist approach emphasizes on how the students construct their own knowledge based on the problems given. Constructivist-based economic module aims to direct the students to develop knowledge from real experience, collaborative activity, reflection and interpretation on economic concept studied and to emphasize on the process and the student's independency through active participation exploring and constructing experience thereby acquiring new knowledge. Furthermore, Abida Khalid [7] stated that constructivism can change the students from passive recipient of information into the active participant in learning process. In learning, even the students are trained to deal with the problem and to think critically thereby finding new idea or thought and knowledge obtained will be more durable. The emphasis on active learning among the students should be developed continuously as the students' creativity and activeness will help them to stand alone in their cognitive life. In addition, module with constructivist approach can make the students construct their own meaning rather than transfer meaning or knowledge, thereby helping the students in connecting economic concept to the fact in daily life. It is in line with Relsas Ygica, Lufri and Ramadhan Sumarmin's [8] study finding that constructivist orientation can improve the students' learning outcome.

Considering the problem elaborated, the author wants to develop a constructivist-based economic module to improve the students' learning outcome, so that the problem statements of research are as follows:

1. How is the development of a constructivist-based economic module to improve the students' learning outcome in private Senior High Schools in Kupang?
2. How effective is the development of a constructivist-based economic module to improve the students' learning outcome in private Senior High Schools in Kupang?

## **METHOD**

This study was a research and development (R&D). Research and development method is the one used to produce a certain product and to test the effectiveness of such the product [9].

The procedure of developing a module based on constructivist learning model to improve the students' learning outcome in economic subject operationally adopting Borg and Gall's model by reducing the last two stages. Here are the eight stages of research cited from Borg and Gall [9]: 1) potency and problem, 2) data collection, 3) product design, 4) design validation, 5) design revision, 6) product trial, 7) product revision, 8) use trial.

The population of research consisted of 14 private senior high schools in Kupang city containing 1,032 students. Meanwhile, the sample was taken using purposive sampling technique, so that finally 3 schools were taken as the sample: SMA PGRI Kupang, SMA Kristen 2 Kupang, and SMA Kristen 1 Kupang. This research was

conducted in those three schools from March 2016 to April 2017. Meanwhile, techniques of collecting data used were observation, interview, and documentation. Technique of analyzing data used in preliminary stages was Miles and Huberman's qualitative model of analysis encompassing data reduction, data display, and conclusion drawing. Meanwhile, data analysis used to process data obtained after conducted the research included descriptive data analysis, data analysis on module validity, data analysis on student questionnaire, product revision, and evaluation and accomplishment. Meanwhile, the plot of a constructivist-based economic model development consists of five stages.

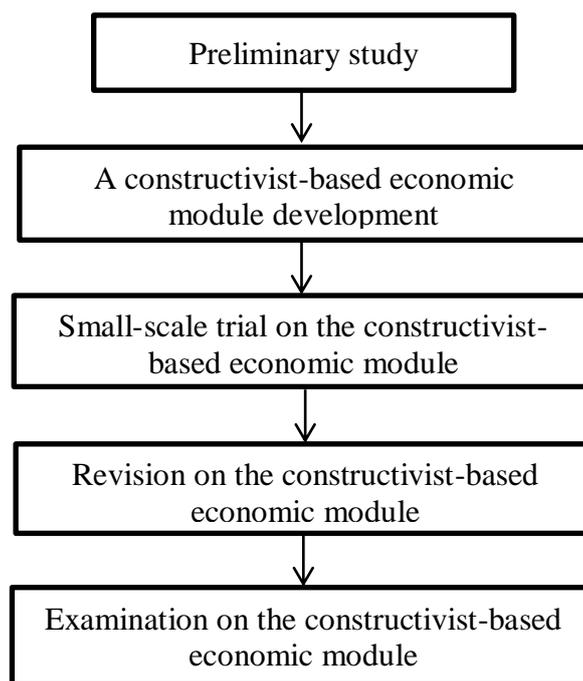


Figure 1. Research Plot

The first stage of development was conducted in two steps: research and information collection and panning, preliminary stage started with pre-survey research aiming to collect any information related to learning process, particularly the problems related to the development of constructivist-based economic module. After the information needed has been adequate, the next stage was to prepare a plan to address the need the school, the teacher and the student face.

The second stage is to develop product. In this stage, the product is developed based on the result of need analysis in pre-survey research. The development of product is design and adjusted with learning objective, material, the need for attractive teaching material, in order to facilitate the students in understanding the content of economic learning material and in learning independently.

In the third stage, the product developed was then trialed in small-scale trial through expert validation and the trial with students using questionnaire to measure the feasibility and effectiveness of product developed.

In the fourth stage, revision was conducted and the constructivist-based economic module is accomplished based on the result of expert validation and students' assessment on the module developed.

In the fifth stage, the product of constructivist-based economic module was examined using large-scale trial using *true experimental design* with *pretest-posttest control group design*.

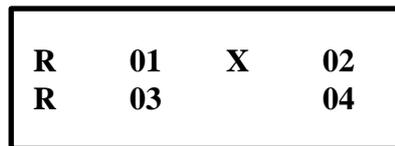


Figure 2. Operational Field Trial Using Pretest-Posttest Control Group Design.

From figure 2, it can be explained that R (Random) meaning that the experimental and control groups were taken randomly. O<sub>1</sub> is pretest value of experimental group, O<sub>3</sub> is pretest value of control group, X treatment on the experimental group, O<sub>2</sub> is posttest value of experimental group O<sub>4</sub>, the posttest value in control group. In the next stage, the effectiveness of constructivist-based economic module was tested using t-test with IBM SPSS 20 software help.

## RESULT AND DISCUSSION

This research and development is conducted based on preliminary study conducted through interviewing the teacher and students in collecting information related to learning process, teaching material completeness and students' learning outcome.

In the first stage, the author conducted a preliminary study to obtain information through structured interview with teachers of economic subject to find out the constraints the teacher and the students face in the learning process. Considering the result of interview with teacher, it can be found that there is a limitation in teaching material and learning media used in the learning process. Teaching material used still derived from module and old student worksheet that can elaborate some material only so that the students tend to memorize a number of material only. The learning method used is still conventional one that only transfers knowledge from teacher to students. It proves that the learning is still teacher-centered so that the students still tend to be passive. Meanwhile, the students need attractive teaching material facilitating the students to learn independently. To solve the problem, an economic module should be developed using constructivist approach emphasizing on how the students construct their own knowledge based on the problem given and can learn independently out of school environment aiming to make the students optimizing their knowledge thereby improving the learning outcome.

In the second stage, after obtaining adequate information through pre-survey research, the next stage is development one aiming to produce a product in the form of constructivist-based economic module that can attract the students' attention to learn independently and to improve the learning outcome. The procedure of developing constructivist-based economic module started with preparing initial design. The design

of draft constructivist-based economic module is adjusted with the constructivist approach consisting of cover, identity, table of content, content map, glossary, Introduction containing some points (standard competency, description, time, prerequisite, manual instruction, final objective) learning activity and references. Here are some figures of constructivist-based economic module design used in the learning process



**Figures 3. Constructivist-Based Economic Module Design**

In the third stage, the module developed is then trialed to find out its feasibility to use by the students in learning process. To test its feasibility, the module is validated by expert and students. The result of validation on module feasibility by experts and students using questionnaire obtains positive response from the experts. The result of material expert’s assessment obtain 97.05% assessment, that from media expert 100%, that from linguist 100%, that from practitioners 92.15%, and that from the students 85.10%. Considering the data of validation, it can be said that the constructivist-based economic module can be used in learning process.

In the fourth stage, after the constructivist-based economic module has been validated by expert and students, the module is revised for perfection. The result of revision and perfection can be used for the large-scale trial.

In the fifth stage, the large-scale trial is conducted to find out the effectiveness of product developed using two classes from different schools with reason to maintain the purity of module development experimentation. The classes used are control and experiment with pretest-posttest control design methods. In this stage, the test on experiment class is treated using constructivist-based economic module, while that on control class using conventional learning method without constructivist-based economic module. The result of pretest before using the constructivist-based economic module obtains the mean pretest score of 67.60 in experiment class and 66.93 in control class.

Considering the result of t-test (independent sample test) in pretest, it can be found that the significance value of t-test is 0.783. That significance value is higher than 0.05 so that it can be concluded that  $H_0$  is supported or there is no significant difference of pretest value between control and experiment classes. T-statistic value is  $0.277 < t$ -table of 2.001. It indicates that there is no significant difference of mean learning outcome between experiment and control classes. Furthermore, posttest using t-test on experiment and control classes after using constructivist-based economic module in the learning process obtains mean posttest score of 85.27 for experiment class, and 75.87 for control class. It indicates that the mean score of experiment class is higher than that of control class.

The result of posttest using t-test (independent sample test) on experimental and control classes shows that significance value of t-test is 0.000. Such the significance value is lower than 0.05 so that it can be concluded that  $H_1$  is supported. T-statistic value is  $5.021 > t$ -table of 2.001. It shows that there is a significant difference of mean learning outcome between students in experiment and those in control classes. From the result, it can be found that the mean score of experiment class is better than control class meaning that the constructivist-based economic module is very effective to improve the students' learning outcome.

## CONCLUSION

Considering the result of research and development conducted and analyzed, it can be concluded that the constructivist-based economic module improves the learning outcome effectively. Such the effectiveness is based on pretest result before using the constructivist-based economic module obtaining the mean score of pretest of 67.60 and after using the constructivist-based economic module in the learning process and posttest is conducted, there is an increase in the mean score of students to 85.27, and then the posttest value using t-test in experiment class is higher (85.27) than that in control class (79.80).

The result of posttest using t-test (independent sample test) on experiment and control classes shows the significance value of t-test is 0.000. The significance value is lower than 0.05, so that it can be concluded that  $H_1$  is supported and t-statistic value is  $5.021 > t$ -table of 2.001. It indicates that there is a significant difference of mean learning outcome between the students in experiment and those in control class. The result shows that the mean score of experiment class is higher than that of control class, meaning that constructivist-based economic module improves the students' learning outcome very effectively and is feasible to use in learning process as indicated with the result of experts' validation and students' assessment with very good criteria of assessment.

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