EARLY STAGE DEVELOPMENT OF GEOGRAPHY MODULES OF DESIGN-BASED PLANNING IN THE STUDY PROGRAM OF EDUCATION GEOGRAPHY STKIP PGRI WEST SUMATERA

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ARTICLE INFO

Article History:
Received Date: 15th June 2017
Received in Revised Form Date: 30th June 2017
Accepted Date: 15th July 2017
Published online Date: 01st November 2017

Key Words:
Development, Modules, Geography of Disaster, Faith-Based

ABSTRACT

The purpose of this research is to develop a faith-based disaster geography module. The module is one source of learning for students, which can facilitate students to get information and easy to apply to the public, so it can be instrumental in facing disaster. The development study used a 4D model involving three steps namely: define, design, and develop. The instruments used are validation, activities and interviews. The define phase showed that the geography lecture material of disaster is in conformity with the standards of competence and achievement lecture. The results showed that the design module validation is valid enough according to the criteria and many improvements. However, the results described here is an initial validation, and therefore still need to be validated by disaster experts, educational experts and Indonesian language experts.

A. Background

Padang is a city at risk for some disasters like earthquake, flood as well as tsunami which can threat any time. Based on this reality, the Geography Education Study Program involving some subjects related to disaster management in their curriculum. This policy is purposed, so that the students have broaden knowledge related to the impact of any type of disaster, as well as how to deal with disasters. Information obtained by students should be easily understood and is applicable in the real situation.
Factually, knowledge of most students in the university related to some disasters is still very poor which is caused by faith, fear of the death, resigned to the situation, and don’t do enough effort to avoid the disaster. Moreover, the available geography module related to disaster is lacking of guidelines on “what and how” to do during disaster period. Based on that reality, it is important to improve students' understanding, knowledge and attitude dealing with disaster. For that reason the availability of complete teaching materials or module related to disaster is very important especially for students and people living in the risk regions.

Based on the above background a study, with the title "Geographic Module of Religious Based Faith in Geography Education Studies Program STKIP PGRI West Sumatra" was conducted.

**METHODOLOGY**

This study was conducted in research and development (Research and development / R&D) method. According to Sugiyono (2008: 407), "R & D is a method of research that is used to produce certain products and to test the effectiveness of the products". Product that will be developed in this study is a geography lecture module based on faith.

This study was aimed to develop a valid, practical, and effective disaster geography module in terms of content and constructs. The development procedure of module used the 4-D model proposed by Thiagarajan et al, in Trianto (2007: 65). The model consisted of 4 stages, namely: definition stage (define), design stage (design), development stage (develop), and dissemination stage (disseminate). However, this study was limited until define stage.

**RESULTS AND DISCUSSION**

The faith-based geographical module was developed using the 4-D model: Define, Design, Develop and Disseminate. However, this research was conducted only at one stage: Define. The result is described as follows:

1. **Define Stage**

This stage is done to see the description of conditions in the field related to the process of teaching of disaster geography in Geography Education Studies Program at STKIP PGRI West Sumatra. At this stage steps analysis was conducted to the syllabus, textbook literature, and characteristic of students through interviews with their peers. The results obtained in each of those steps is described as follows:

a) **Analysis of Syllabus**

The syllabus analysis is done to see whether the given material is in accordance with the expected competence. The result of the syllabus analysis is known that the Competency Standard (SK) of this course is: the students is able to master the theoretical concepts, describing some example of events, and mindset about geographical disaster such as: disaster mitigation concepts of disaster and approaches that can be done. Moreover, students are targeted to have knowledge on flood mitigation and landslide, earthquake and tsunami mitigation, as well as disaster adaptation related to social and economic vulnerability caused by disaster, disaster related local wisdom, and use all those elements in solving of various problems caused by geographical disaster. Materials which are in accordance with the expected
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competencies, namely: finding solutions to solve disaster cases as a provision of learning in junior and senior high schools.

b). Textbook Analysis

Analysis of the textbooks conducted was aimed to see whether the content of the book is in accordance with the competence described in the syllabus. Textbooks analyzed in this study are all textbooks that are used in teaching program of geographical disaster including obligatorisch text book authored by Hermon (2012) entitled Hydrometeorological Disaster Mitigation and Geography of Natural Disasters published by PT. Raja Grafindo Persada authored by Hermon (2015).

Analysis has been performed on contents described in the book covering mitigation of hydrometeorology disaster, flood mitigation, landslide mitigation, ecological disaster mitigation, mitigation of land degradation disaster, mitigation of tornado disaster, drought disaster mitigation. Observation showed that description of the material on textbooks is difficult for students to be understood. Messages presented could not lead students in finding a concept of faith-based geographical disaster.

Based on the existing syllabus, the module was designed in such a way that it can facilitate the students to be able to find the concept independently. This situation enabled students to develop a good concept of geographical disaster that in turn could develop appropriate strategy in facing a real disaster.

c). Literature Analysis

Literature analysis is an activity undertaken to gather materials related to module design. What is the characteristic of the module to be developed which is faith-based. Guided discovery is a method that encourages students to think alone, analyze by themselves so that they can find the principle of the material or data that has been provided by the lecturer course. In using the guided discovery method the lecturer's role is as a facilitator. In this position, they guide the student to find the solution from some given cases and accompanied with the instructions or directions contained in the module, so the the students just follow the instructions given in the module.

d). Analysis of Student Characteristics

Student Characteristics was observed in order to identify the motivation of the students in Geography Education Studies Program STKIP PGRI West Sumatra to learn the geography subject related to disaster and its mitigation. The results showed that most of the students are less motivated. Analysis indicated, that the condition was caused by inappropriate textbooks used for teaching activity. Such situation did not facilitate the student to learn independently and to find the concept of geographical disaster and its related mitigation.

Results from observations in lecturing process showed some facts described as follows:

1) Students were not able to find the concept geographical disaster. The concept was not involved in the process to build conceptual understanding such as finding strategy in facing of disaster.
2) The learning material used is failed to promote the students actively.
3) The students have difficulties in finding solutions dealing with disasters with limited learning resources.
4) Only students who have high motivation and good thinking ability that can do some tasks related with disaster problem.
5) Learning materials provided by the Study Program library and also Central Library at STKIP PGRI Padang, West Sumatra were limited in quantity and quality, thus hampering the process of geographical disaster lesson.

Based on that analysis, the faith-based geographical disaster module was developed in order to be able to encourage students to analytical thinking, and enable them to find the principle messages of the module.

e) Interview with Friends

Interviews with colleagues was aimed to know the obstacles faced in the field in relation to geographical disaster lectures. The result indicated that during this time, the geographical disaster education facilitated by only two textbooks and lecture method. Students so far were depended on the explanation of lecturers in understanding the material, meaning that students have not been able to learn independently. They require a practical teaching materials to facilitate them to learn independently and need less help from lecturers during teaching process.

The results of the defining phase can be summarized as follows:

<table>
<thead>
<tr>
<th>Results of Syllabus Geography Analysis of Disaster Analysis</th>
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<tbody>
<tr>
<td>1. The result of the syllabus analysis is known that the Competence Standards (SK) of this course are students able to master theoretical concepts, examples of events, mindset about disaster geography include: disaster mitigation concepts and approaches, flood and landslide mitigation, earthquake and tsunami mitigation, adaptation of flood and landslide disaster, adaptation of disaster and tsunami, social-economic vulnerability due to disaster, local wisdom about disaster, and can use it in solving various kinds of disaster geography problem.</td>
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<tr>
<td>2. Material in accordance with the expected competence, namely: finding solutions to solve disaster cases as the provision of learning in junior and senior high schools.</td>
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<tr>
<th>Result of Textbook Analysis Course of Geography of Disaster</th>
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<tbody>
<tr>
<td>2. Presentation of material in textbooks is difficult to understand so they could not be able to guide students in finding a concept of faith-based disaster geography.</td>
</tr>
<tr>
<td>3. Geographic module of design in disaster-based design, so that students have a good concept of geography of disaster and behave and behave appropriately appropriate in the face of disaster.</td>
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<table>
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<tr>
<th>Result of Characteristic Analysis of Student</th>
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<tbody>
<tr>
<td>1. Students were not able to find the concept learned, this will not involve in the process of building understanding of concepts such as finding steps dealing with disaster.</td>
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<tr>
<td>2. Learning resources used could not able to involve students actively.</td>
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<tr>
<td>3. Students were difficult to find solutions dealing with disasters with limited learning resources.</td>
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<tr>
<td>4. Only students who have high motivation and good thinking ability that can do disaster related tasks.</td>
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<tr>
<td>5. Learning resources provided by the Study Program and Central Library at STKIP PGRI, Padang West Sumatra has limited in quantity and quality of books, thus hampering the process of geographical disaster lesson.</td>
</tr>
</tbody>
</table>
Result of Literature Collection for Module Design
1. Geography Journal Disaster
2. BNPB both National and Provincial

Results Discussion with Friends
1. Lectures using Textbooks
2. Lectures use lecture methods

CONCLUSION
1. Faith-based disaster geography module is a lecture material for students of Geography Education Studies Program STKIP PGRI West Sumatera which can be used for one semester.
2. Disaster geography module implemented until the definitional phase (define).

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