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RESEARCH ARTICLE

DESIGN OF DEVELOPMENT ASSESSMENT LEARNING CRITICAL THINKING.

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Abstract

The basic consideration of this research is to make a valid evaluation tool and as a renewal in the evaluation of the learning that has been done. This is because evaluation tool is a very important thing to measure competency achievement. Efforts to improve the quality of learning can be done through learning tools and how the assessment is applied. This is actually one of the factors that determine student achievement. Another factor in learning Geography is the factor of within each student in this case critical thinking. The purpose of this study was to produce a valid learning assessment tool in disaster geography. This research is a two phase research development that is preliminery research and prototyping research. The results of this study can be three types of assessment: self assessment, peer assessment and critical thinking assessment.

Introduction:-

Efforts to improve the quality of learning can be done through learning tools and how the assessment is applied. This is actually one of the factors that determine student achievement. Another factor in learning is the factor of within each student in this case critical thinking.

Fahrurazi (2011) expresses critical thinking as: (1) an attitude of deep thinking about matters and matters within the reach of one's experience; (2) knowledge of logical methods of examination and reasoning; and (3) a kind of skill to apply those methods. Critical thinking demands strenuous efforts to examine every assumption or assumptive knowledge on the basis of its supporting evidence and the subsequent conclusions it brings.

Critical thinking implies a process of judgment or decision-making which is full of consideration and is carried out independently. Peter Facione, argues that critical thinking is the process of formulating reasons and considerations regarding facts, circumstances, concepts, methods and criteria. Richard Paul defines critical thinking as the process of formulating active and skillful active reasons from conceptualising, applying, analyzing, integrating (synthesizing), or evaluating information gathered through observation, experience, reflection, reasoning or communication as a basis in determining the action.

Critical thinking has several characteristics as suggested by Wade in Hassoubbah (2004: 39) which identifies eight critical thinking characteristics, which include: (1) Activity formulating questions, (2) Limiting problems, (3) Testing data, (4)) (5) Avoid oversimplification, (7) Consider various interpretations, and (8) Tolerate ambiguity

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Based on the critical thinking criteria expressed by Wade in Hassoubbah (2004: 39) it can be revealed that one has been critical if they already have a clear flow of thinking that is a scientific thinking line that starts from formulating questions, limiting problems and avoiding errors as small as possible. So someone who is critical is someone who is able to argue with clear and definitive data and must be able to consider the decision to be taken.

Lecturers as technical implementers of the curriculum implementation in the field of teaching in the classroom must have an assessment to measure the achievement of learning objectives. Through this research will be developed assessment tools that are expected to be able to assess students' critical thinking skills in an authentic and comprehensive way. Assessment tools in this study are (1) self assessment assessment, (2) peer assessment assessment (3) critical thinking assessment. With this assessment, it is hoped that the process of measuring the learning outcomes is no longer considered an unattractive activity and is not a separate part of the lecture process (Setiani: 2011).

The subjects taken in this research are disaster geography. Geography of this disaster is about the types of disasters that occur in Indonesia, so that students are expected to think critically in dealing with disasters in Indonesia. In the lecture assessment is needed to see the level of critical thinking of students. During the lecture process there is no device that can measure students' critical thinking skills. For that we need a development of learning tools, especially on the assessment of learning.

The critical thinking assessment developed is an assessment that can describe students' critical thinking skills in Disaster Geography learning. It is expected to integrate learning outcomes with the overall learning process, even the assessment itself is an integral part of the overall learning process. So through the assessment, it is expected that lecturers can encompass all process activities and student learning outcomes by using various instruments that can prioritize the individual potential

This study aims to: (a) produce a valid assessment of self-assessment on disaster geography learning (b) produce a valid peer assessment assessment of disaster geographic learning (c) produce valid critical thinking assessments on geographic learning disasters.

Methods:-

The development tools in this study follow the general design research tool according to plomp (2013: 19) which consists of 3 phases, namely preliminary research, prototyping phase, and assessment phase. In this research only 2 phase, that is phase of preliminary research and prototyping phase.

Preliminary research:-

At this stage, problem identification and data collection for the design of assessment tools are provided, among others, (a) the types of assessments applied and their implementation procedures in Disaster Geography lectures, (b) student expectations of assessment tools implemented in Disaster Geography, (c) involvement of lecturers and students in the implementation of assessment in Disaster Geography learning. (d) certain skills and competencies required in Disaster Geography lectures. Data collection was conducted through interviews with the team of lecturers of Disaster Geography lecturers and students who attended Disaster Geography lectures, syllabus document collection, lecture plan and student work result. Interview data were analyzed descriptively qualitative.

Prototyping phase:-

Based on preliminary investigation results, the preparation of assessment tools consisted of behavioral / activity assessments, self assessment assessments, portfolio assessments, critical thinking assessments, reasoning and communication. Formative evaluation is instrumental in the prototyping stage. The activities of prototyping and formative evaluation are carried out as follows: (a) Establishment of assessment methods (b) Design of systematic and assessment structures and conduct self-evaluation. Furthermore, an analysis and revision of the systematic design and assessment structure is accompanied by success criteria, and the design of the assessment implementation. (C) Prepare assessment protocols based on systematic design and assessment structure, self-evaluate, analyze and revise the prototype based on the results of self-evaluation (d) Perform content validation and construct (expert review) on prototype assessment, analyze, and revise prototype based on expert review.

The instruments used in this research are (1) interview guides, (2) assessment assessment sheets (validation sheet) (3) Observation sheets of dandocene student activities (4) Questionnaire response of students and lecturers (5)

critical thinking test using critical thinking indicator . Data analysis techniques in this research are validity analysis, practicality analysis and effectiveness analysis.

Result And Discussion:-

Preliminery Research Result:-

The results of interviews with students and lecturers, observation and review of lecture documents are conducted to obtain data on the types of assessment, advantages and disadvantages of assessment, the types of assessment desired, the views of lecturers / students who can touch three domains, and the views of lecturers / students on assessments that can develop the ability to think critically, reason and communication. Each of the results on these aspects is as follows

1. Type of Assessment. Type of assessment used Activity and attitude observation sheets, Written Test (Quiz and Trial), but the observation sheet has not been well-documented. Assessment used so far is still not enough because it is still focused on cognitive. Assessment of self and colleagues has not been done by students, just a cross-correction of the work. Critical thinking ability is measured but still very weak, need to prepare the right instrument instrument
2. The advantages and disadvantages of the assessment. The advantages of the assessment used so far are that the lecturer can observe in detail for each individual, and the indicators can be seen (read, write etc.), but to observe intensively the observer is required other than the lecturer. In addition, the lecturer stated that the assessment aspect of the instrument still requires improvement and development.
3. Type of assessment desired. Lecturers expect a device that can assess the entire domain, such as exam questions, observing activities, motivation and fortopolio etc. While the students expect the lecturer to give an assessment not only through the exam results and tasks but also observe things related to attitudes and skills
4. Lecturer / student opinion on an assessment that can touch three domains, Observation of the activity should have a contribution to the final value. Likewise, self-assessment and students are expected to contribute to the final value.
5. Lecturer / student's view of the assessment that can develop students' critical geography thinking ability is still low. Therefore, appropriate and well-measured assessments are required

Prototyping Phase Result:-

Design Result of Self Asessment:-

The self-assessment assessment is designed on five aspects: responsibility, self-confidence, discipline, honesty and tolerance. This aspect developed into 14 self-assessment statements.

Aspects of Responsibility were developed into five statements. The statement is 1) I follow the best of course materials, 2) I think that disaster Geography material is very important material, 3) I record explanation / things that I consider important so that I have a complete record, 4) I enjoying the Tasks of Disaster Mitigation, and 5) I do the work in earnest

The Confidence Aspect developed into four statements. The statement is 1) I believe that the material of Disaster Mitigation is an easily understood material, 2) I dare to ask questions if there is a Disaster Mitigation material that I have not understood, 3) I dare to express opinions, give suggestions or give criticism during lectures. And 4) I discussed assignments with colleagues

The Discipline aspect consists of two statements. The statements are 1) I log on time during the Geography disaster course, and 2) I submit the assignment on time. The Honesty aspect consists of two statements. The statement is 1) I acknowledge the mistakes or shortcomings of the tasks I am working on, and 2) I do the test honestly (not cheating or cheat). Furthermore Aspects of Tolerance only developed into a statement that I respect and appreciate the opinions of colleagues though disagree

Design Result Of Friend's Asessment:-

Assessment assessment of peers follows self assessment assessments. The design consists of five aspects: responsibility, self-confidence, discipline, honesty and tolerance. This aspect developed into 13 self-assessment statements. His statement is:

1. Follow the best course material Geography disaster
2. Record explanations / matters that are considered important so that the relevant has a complete record
3. Enjoyed the task
4. Do the work in earnest
5. Bringing a textbook / geography book of disaster sources
6. Dare to ask questions
7. Dare to argue and advise
8. Discussing assignments with colleagues
9. Log on time during Disaster geography lectures on Disaster Mitigation materials
10. Submit Disaster Mitigation Tasks on time
11. Orderly during the course of Disaster Mitigation material
12. Doing the exam honestly (not cheating or cheat)
13. Respect and value the opinions of others

Result of critical thinking design:-

The critical thinking appraisal has been designed for Disaster Mitigation material. The assessment consists of five parts: 1) Hazards, 2) Risks, 3) Vulnerability, 4) Potential, Disaster 5) Disaster Management. The design of the assessment is adjusted and takes into account the Learning Outcome from Geography of Disasters. The design of this assessment is critical by taking only six critical thinking indicators: 1) Identifying assumptions, 2) formulating the issues, 3) determining the consequences of a given provision, 4) detecting the bias, 5) revealing the data / concepts / definitions / theorem in solving the problem, and 6) evaluating the relevant argument in solving the problem.

Critical thinking assessments are designed on the lattice. The assessment is completed with a scoring and assessment rubric. Grid developed based on material, Learning Achievement and indicators. While the rubric is developed on 4 levels namely: Very Critical (3), Critical (2), Self Critical (1), and Not Critical (0).

Conclusion:-

Based on the results of research can be concluded that product development requires expert evaluation and expert for the material developed. The developed assessment should be completed for all materials. In the activity assessment, peer assessment and peer assessment is an integral part of the evaluation process in disaster geography lectures. In order that the developed product is practically used and follow the assessment process required by the lecture objectives in order to compile the device with the assessment process in the SNC-SN and pay attention to all aspects of authentic assessment

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