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RESEARCH ARTICLE

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Implementation of Learning Management Based on Local Wisdom to Increase Critical Thinking

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This study aims to determine the implementation of learning systems through innovative management based on local wisdom. Implementation implemented is expected to improve the ability of critical thinking for students. Learning device learning data is collected with validation sheet, implementation sheet, teacher and student response questionnaire, and critical thinking skills test. The results showed that the learning tools based on local wisdom is one of the innovations in the development of learning devices that are currently widely applied in some areas. Local wisdom developed is local food, karawitan, dance, batik, and other forms of local wisdom. With a variety of cultures in Indonesia, it is very supportive to develop a device that is integrated with local wisdom of the local area. Students who are given learning materials oriented local wisdom can improve the ability of critical thinking.

Keywords: Learning Management, Local Wisdom, Critical Thinking.

1. INTRODUCTION

Education is a lifelong need. Every human being needs education, until when and wherever he is. Education is very important, because without human education will be difficult to develop and even going backward. Thus education should really be directed to produce qualified and competing human beings, in addition to having noble minds and good morals. Education is one of the important factors in determining the progress of a nation. The purpose of National Education as contained in Article 3 of Law no. 20 of 2003 on the National Education System states that the national education aims for the development of potential learners to be a human being who believes and cautious to God Almighty, noble, healthy, knowledgeable, capable, creative, independent, and become a democratic and responsible citizen.

The noble values of culture owned by community groups in Indonesia already has a nation as an invaluable potential for the development and progress of the Indonesian nation. Indonesian society is a plural society both in terms of culture, religion, and language that has noble values as its local wisdom. In this research seeks to establish the nature of education that can not be separated from the culture of society or the nation of Indonesia is compound. Each ethnic tribe of Indonesia has its own culture, has its own noble cultural values, and has a local advantage or have local knowledge (local knowladge, local wisdom) itself. Implementation of this local wisdom in schools is expected to foster student's critical attitude.

Students' formal thinking skills that include hypothetical-deductive thinking skills, proportional thinking skills, combinatorial thinking skills, and reflective thinking skills as basic thinking skills need to be taken as substances that must be taken seriously in education.[1,2] This basic thinking ability must be continuously developed toward the ability and critical thinking skills.

Gall, Gall, and Borg,[3] describe educational research through development as a process used to develop and validate educational products. The steps of this process are usually referred to as the R&D (research and development) cycle, which consists of studying the research findings related to the product to be developed, developing the product based on these findings, the testing field in the setting in which it will be used eventually, and revise it to correct the deficiencies found in the testing phase. In a more rigorous program of R&D, this cycle is repeated until field-test data indicates that the product meets defined behavioral objectives.

In an earlier study conducted by Sudarmiani,[4] this improvement happened due to some reasons namely: (1) The teaching is more fun when it is done through documentary movie as the media, (2) the social condition analysis activities are able to motivate students to think more critically about the social condition. S. Leo Agung,[5] resulted in the study that the local wisdom-based learning model developed in Bengawan Solo area can increase student learning outcomes and can improve student activeness

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in learning. With the model of social interaction and behavior modification is expected to improve learning outcomes. Dewi, Poedjiastoeti, and Prahani,[6] this model is based on local wisdom through the adaptation of environmental conservation values contained in the social life of the community, problem-solving skills, scientific communication, and caring attitude to maintain environmental balance.

In developing the research for critical thinking has also been done by Mustofa and Yuwana,[7] entitled the development of appreciation learning model of Indonesia literature based critical discourse analysis to improve the students' critical thinking skill is a critical analysis research in improving student's critical thinking. Kuswandono et al.,[8] also conducted a study entitled Revisiting local wisdom: efforts to improve quality education in Indonesia with the result that local wisdom has a significant impact on the learning process in Indonesia. Based on this, it is hoped that the application of development model through local wisdom in Junior High School Madiun can increase critical thinking. Dahliani, I. Sumarno, P. Setijanti,[9] Local wisdom on the built environment in globalization era, changing with the development of technology and communications. Changes occur in the pattern of space and building elements, but the meaning contained in the building as a form of local wisdom is maintained. In the era of globalization, a blend of cultures will occur. In this case, local wisdom can keep up with technology in a way taking into account the local character, the climate and natural conditions in the built environment.

2. EXPERIMENTAL DETAILS

This study aims to determine the implementation of learning systems through innovative management based on local wisdom. Implementation implemented is expected to improve the ability of critical thinking for students. Research development is one type of research that is widely developed.[10–12] Research development is one type of research that can be a liaison or breaker gap between basic research with applied research.[10,13]

This research method is a development research which is carried out by referring to Plomp development procedure. Plomp model is considered more flexible and flexible because at each step contains development activities that can be adapted to the characteristics of research. Stages include: (1) planning, (2) action implementation, (3) Observation and (4) Reflection in the form of assessment (semi-summative evaluation). The subjects of this study were teachers and students of 7th grade academic years 2016/2017. Learning device learning data is collected with validation sheet, implementation sheet, teacher and student response questionnaire, and critical thinking skills test.

3. RESULTS AND DISCUSSION

Research development of the management of learning based on local wisdom held 3 (three) meetings. The implementation of this research was conducted on Wednesday, September 14th, 2016 until Wednesday, September 21st, 2016. The implementation procedure includes four stages of planning, implementation of action, observation, and reflection. The results obtained from the development of tools that have been done include: Learning Implementation Plan, Student Book, Student Worksheet, Learning Outcome Test.

Devices that have been developed are further validated by validators to determine the validity of the device. If the learning device is valid, it is ready for trial. Specifically, the four stages of the study are described as follows:

3.1. Planning

Planning stages carried out in the second cycle refers to alternative actions and solutions formulated by researchers and collaborators at the first stage of reflection. Steps taken in the second cycle of planning activities carried out with reference to the data and findings obtained in the reflection activities in the first cycle, the planning that covers the various steps of activities before the action is done with the model of distribution activities by distribution activities by preparing research support devices: (1) Coordinate with collaborators and request permission from the Principal to conduct field visits as implementation of learning models of social interaction and modification of behavior based on local wisdom. Prepare learning tools such as: syllabus, Learning Program Plan, questionnaire, grid test of competency test, competency test question, and answer key. (2) Prepare media and learning tools such as power book package, laptop, LCD. (3) Prepare the instruments of data collection among others. (a) a list of names of students of 7th grade. (b) sheets of recaptulation of student learning outcomes. (c) test result sheet. (d) field note sheets.

3.2. Implementation of Action

Implementation of the action in the first cycle is carried out during three meetings and ends with a test of learning outcomes and a questionnaire filling. Implementation of the study was conducted on Wednesday, September 14th to Wednesday, September 21st, 2016 with Core Competence "Understanding knowledge (factual, conceptual, and procedural) based on his curiosity about science, technology, art, culture related phenomena and visible eye events. "Understanding the concept of interaction between people and space, resulting in a variety of economic activities (production, distribution, consumption, demand, and supply) and interactions between spaces for the sustainability of economic, social and cultural life of Indonesia." Allocation of time required for the implementation of first cycle action is 6×40 minutes.

3.3. Observation

Observation activity in the second cycle, researchers found increased activeness in carrying out the investigation. Overall the students play an active role in carrying out their respective duties, It is because the problems are observed really as they experience and feel in their daily lives. Just as when presenting an observation report in front of the class, the activity of asking and responding to questions increases sharply, it can be seen during the discussion, almost all students raised their hands to respond to the investigation report of the presenter group. Some students are upset because they are not given the opportunity to express their response. Seeing these conditions collaborators occasionally give understanding to students that remembering time is not possible if all questions diaokmodir. The solution is that each question should represent the group and each group is given the opportunity to ask one question.

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Table I. Comparison of learning result data on pre-action, cycle I, and cycle II.

No	Learning outcomes	Initial condition	Cycle 1	Cycle 2
1	Average value	75	87	95
2	Percentage completed	33%	60%	87%
3	Percentage no completed	67%	40%	13%
4	Achievement	Not completed	Not completed	Completed

3.4. Reflection

Based on the data of student learning outcomes in the second cycle it can be concluded that the results of this class action research already meet the criteria of success of the study. It refers to the average grade score of 95 or 87% learning mastery. Referring to the data above learning results, then the second cycle of research implementation meets the criteria of success of the research that has been determined. Therefore, this study was discontinued until the second cycle.

Data of study result of research was obtained from the implementation of competency test conducted at second meeting on Wednesday, September 21st, 2016. Implementation of second cycle competency test test followed by 30 students and conducted for 20 minutes. The number of tested questions is 20 items with multiple choice objective type.

Comparison of student learning result data on initial condition (Pre-Action), Cycle I and Cycle II after adding local wisdom. Comparison of learning outcomes ranging from initial conditions (pre-action), first cycle, and second cycle then below presented the comparison table as follows.

Based on the data of student learning outcomes, the average student score at the initial condition is only 75 or percentage of 33% completeness. After the first cycle, the average learning outcomes increase to 87 or the completion percentage reaches 60%, after the action on the third cycle average learning outcome reaches 95 or the percentage of mastery increases to 87%. Based on the data of these learning results, the research on this second cycle has been in accordance with the established success indicator of 80% after adding local wisdom in the learning process.

4. CONCLUSION

The results showed that the learning tools based on local wisdom is one of the innovations in the development of learning devices that are currently widely applied in some areas. Local wisdom developed is local food, karawitan, dance, batik, and other forms of local wisdom. With a variety of cultures in Indonesia, it is very supportive to develop a device that is integrated with local wisdom of the local area. Students who are given learning materials oriented local wisdom can improve students' critical thinking skills.

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