IMPLEMENTATION OF CRITICAL REVIEW IN SCIENCE CURRICULUM STUDY COURSE TO DEVELOP “INTELLIGENT AND STRONG” CONSERVATION CHARACTER IN DEALING WITH CURRICULA DUALISM IN INDONESIA

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ABSTRACT

The purpose of this study is 1) to determine whether the implementation of the critical review in the study of science curriculum course can develop the conservation character of prospective science teachers in facing curriculum dualism in Indonesia, 2) to determine the response to the application of students’ critical review of learning. The approach used in this study was quantitative approach. This research was quasi-experimental. The design was pretest-posttest design experiment. Subjects in this study were second semester students of Department of Integrated Science Faculty of Mathematics and Natural Sciences Semarang State University who took Science Curriculum Study course. The study was conducted at Department of Integrated Science Faculty of Mathematics and Natural Sciences Semarang State University to students. The study was conducted in the Academic Year 2014/2015. Data collection was done by using test, observation and questionnaire. The questionnaire was used to assess the character of smart and strong, and the implementation of students’ interest in learning activity. Therefore the research found that smart and strong of students’ character began to develop and entrenched, and 87.5% of students were interested in the application of critical review.

Keywords – critical review, conservation character, curriculum dualism

Introduction – critical review, conservation character, curriculum dualism

Based on the circular letter of Minister of Education and Culture number 179 342 / MPK / KR / 2014 showed the fact that in the second semester of 2014/2015 Indonesia education experienced curriculum dualism. Curricula dualism means Indonesia used two different curricula, they are 2013 and KTSP curriculum. This situation is considered to be irrelevant with the mandate of 1945 Constitution which states on equal justice for the people of Indonesia in the world of education.

According to Alawiyah (2015) Ministry of Primary, Secondary Education and Culture decided to stop Curriculum 2013 (K13) because of many obstacles to be faced in the field, mainly it is related to the low competence of teachers and book references distribution barriers. Referring to Law No. 14/2005 on Teachers and Lecturers, this fact seems very sad in the world of education because to be a good teachers, they should have four basic skills that are needed in support of the implementation of the curriculum, every teacher should have that competency of pedagogic, personal, professional and social. However, by looking at the number of complaints of teachers in preparing for the implementation of Curriculum 2013 it showed that teacher education has not been able to produce teachers with those competencies (Alawiyah, 2014).

Study Program of Science Education as the place to train qualified prospective teachers should prepare students to master the four basic competencies. One of them is through Science Curriculum Study course. In this course, students should master science curriculum development from time to time, strengths and weaknesses of each science curriculum, characteristics of science education curriculum for junior high school / vocational school, and science curriculum...
analysis from several countries. Based on this description the students are expected to master the content of existing curricula in Indonesia and some other countries, in addition to the various developments in the curriculum, students are expected to master, adapt and use the curriculum that is used in the country where they teach.

Efforts made by the lecturer to address student confusion when facing different conditions of the school curriculum is a way to give some preparatory steps. One of them is by using a critical review of the study. Critical review is the task of writing to summarize and evaluate a discourse. It can be the review of book, chapter, or journal article. In writing a critical review, students should read carefully and also read other similar posts to give comprehensive, objective and factual review and evaluation, (Mort, Hallion and Downey, 2005).

The problems of this study whether the implementation of the critical review on the Science Curriculum Study course can develop the conservation character of science prospective teachers to face curricula dualism in Indonesia? and what is the response of the application of critical review in student learning activity?

The purpose of this study is 1) to determine whether the implementation of the critical review in Science Curriculum Study course can develop intelligent and strong character of conservation of science prospective teachers to face curricula dualism in Indonesia, 2) determine the response of the application of critical review in student learning activity.

The benefits of this research are to add variety and learning methods as an effort to develop the conservation character science of prospective science teachers to face curricula dualism in Indonesia.

Theoretical Review

Khusniati (2014) mentioned that the critical review can be proven giving impact on students’ ability in learning science as well as Parmin (2014) said that application of critical review or critical assessment of scientific articles can improve students' ability to develop a research proposal. According to the document the University of Saskatchewan (2011) it is written that critical review of academic exercise helps improving the basic skills of researching, being familiar with the evaluation process on the social research and building critical thinking skills. By improving critical thinking skill, students are expected to develop intelligent and strong as character of conservation. Thus, science education students as prospective science teacher are expected to be able to adapt in the changes of curriculum. So, they will be ready to apply the curriculum that is used in schools where they teach for example KTSP or 2013 curriculum, and the national curriculum in Indonesia in case there will be some changes.

The values of noble character that has been developed can be developed further to some characters of religious values, honest, caring, tolerant, democratic, polite, intelligent, and strong. Those are derived from the main values of Semarang State University, consisting of healthy, excellent, and prosperous. Religious, honest, tolerant, democratic, and polite values are derived from healthy values. Smart and strong are derived from excellent value. Therefore caring is a reflection of prosperous value. Those eight characters should be developed comprehensively and integrally not partially because those life values are supporting each other (Handoyo and Tijan, 2010)

Research Methods

The approach used in this study was quantitative approach. According to Sugiyono (2007: 13), research data on a quantitative approach are in the form of figure and analysis using statistics. Referring
to the research objectives, this research was a quasi-experimental. The study design used pretest-posttest design experiment.

The steps of research can be seen in Figure 1.

Figure 1. Steps of Research Experiment

Subjects in this study were second semester students of Department of Integrated Science Faculty of Mathematics and Natural Sciences Semarang State University who took Science Curriculum Study course. The study was conducted at Department of Integrated Science Faculty of Mathematics and Natural Sciences Semarang State University to students. The study was conducted in the Academic Year 2014/2015.

Data collection was done by using test, observation and questionnaire. The questionnaire was used to assess the character of smart and strong, and the implementation of students’ interest in learning activity. Observation assessment sheet was used to collect critical review of the curriculum.

As stated by Sugiyono (2007: 207), data analysis is classifying data based on activity variables and types of respondents, tabulating the data based on the variables and the type of respondent, presenting data for each variable studied, and performing hypothesis test. The data in this study obtained data from direct observation to reveal the increasing students' understanding.

Questionnaire for students was used to find out the character of intelligent and strong and students’ interest in the application of critical review. It was analyzed by using the following formula:

\[ P = \frac{n}{N} \times 100\% \]

Description:

- \( P \) = Percentage of intelligent/strong character
- \( n \) = number of scores obtained
- \( N \) = Total maximum score

Table 1. Categories Character smart / strong

<table>
<thead>
<tr>
<th>Interval scores</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>( 81.25 \leq \text{skor} \leq 100.00 )</td>
<td>MK (entrenched)</td>
</tr>
<tr>
<td>( 62.50 \leq \text{skor} \leq 81.25 )</td>
<td>MB (Start to Develop)</td>
</tr>
<tr>
<td>( 43.75 \leq \text{skor} \leq 62.50 )</td>
<td>MT (Start to Appear)</td>
</tr>
<tr>
<td>( 25.00 \leq \text{skor} \leq 43.75 )</td>
<td>BT (Not Visible)</td>
</tr>
</tbody>
</table>

This study is successful if 1) Students character smart and strong reach criteria of MB (Start to Develop) 2) 75% of the students are interested in the implementation of critical review on Science Curriculum Study course to develop critical thinking skills based on character of conservation to face curricula dualism in Indonesia.

Results and Discussion

This study was conducted to determine the role of critical review on the implementation of Science Curriculum Study course to develop the conservation character science of prospective science teachers to face curricula dualism in Indonesia. In addition, it also analyzed the students’ responses related to implementation of critical review.

The results of the data analysis are explained respectively as: 1) intelligent and strong characters of students, 2) students’ responses related to implementation of critical review.


Conservation character examined in this study is intelligent and strong character. Intelligent character assessment is obtained from the results of the questionnaire and described in Figure 2:
Based on Figure 3, 67% of students begin to be entrenched intelligent character, 29% start to develop and 4% start to appear. Intelligent character has the characteristics of (1) thinking logically consistent with the concept of science; (2) finding the truth logically and methodologically; (3) solving problems accurately based on empirical data; (4) being creative in developing a model or new ways; (5) finding a rapid solution based on logical thinking (Handoyo and Tijan, 2010).

Assessment strong character is determined from the results of the questionnaire and described in Figure 3:

Based on Figure 4, 71% of students begin to be entrenched strong characters, 24% start to develop and 5% start to appear. Strong character is the attitude and behavior of people who take courage to face of problems, challenges, and development of a dynamic life with all of the risks. Strong characters have the characteristics of:
- being strong in facing the problems;
- being eager to achieve optimal work results;
- not easily being provoked by inaccurate issues;
- being able to work under pressure;
- believing in themselves;
- conquering the challenges (Handoyo and Tijan, 2010).

2. Students’ responses related to implementation of critical review

Based on the questionnaire distributed to students, data showed that 87.5% of students enjoy the application of critical review. According to them, this learning activity is different from other activities. In addition, the application of critical review to make them understand what the observation results of curriculum presented in class.

From the explanation that has been elaborated, it showed that the application of critical reviews can improve students' critical thinking skills. Students are also expected to master a variety of changes to the existing curriculum in Indonesia and other countries. In addition, parallel with intelligent and strong characters that start to develop, students are expected to master, adapt and use a curriculum that is used in the country where they teach.

Conclusions and Recommendations

Intelligent and strong characters of students start to develop and to be entrenched during learning process by using critical review, and 87.5% of the students are interested in the application of critical review.

Suggestion for Application of critical review could be used in some different subjects to find out how it affects the character of students in other courses.

Reference.


Undang-undang No. 20 tahun 2003, tentang Sistem Pendidikan Nasional