Improving the College Students’ Learning Results and Active Participations in the Elementary Social Science Subject by using Jigsaw Cooperative Learning Technique

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ABSTRACT

This study aimed to improve the college students’ active participation and results in learning the Elementary Social Science subject by using Jigsaw cooperative learning technique and explain their responses to the implementation of the technique. This is a Classroom Action Research. The sample and population used in this study were the students in the F 2015 class who consisted of 38 students; 11 men and 29 women. The data used are observation, learning results/scores, and the students’ responses which were supported by documentation and field notes. Simple quantitative and qualitative descriptive data analysis were used in this research. The results of the study showed an increase in the participation and results, from 72.25% (27 active students) and 73.25 as the average score in Cycle 1 to 83% (32 active students) and 84.5 as the average score in Cycle 2. The students also showed a positive response to the implementation of Jigsaw cooperative learning technique.

Key Words: learning result, active participation, Jigsaw

INTRODUCTION

The four pillars of learning according to UNESCO to achieve an effective learning are: (1) learning to know, (2) learning to do, (3) learning to be, and (4) learning to live together. The four can be described that in the process of education through various learning activities, the learners are directed to gain knowledge about something, implements what he knows to make himself as someone better in social life with others.

The National Standards of Higher Education (SN DIKTI) regulated in the Regulation of the Minister of Education and Culture No. 49 of 2014 is a standard that includes the National Education Standards, plus the National Standards of Research, and the National Standards of Community Service, demanding a different perspective
on curriculum development and implementation. In the past, curriculum development was done by the highest authority, in this case the Curriculum Center, while the implementation was done by the educational unit.

The curriculum should adapt the characteristics, advantages, and uniqueness of each student. The government provides the targets and indicators of learning achievement. How to reach these targets and indicators is left to the teachers. The government also creates the curriculum models. The Indonesian Curriculum Development for The National Qualification Framework (Indonesian: *Pengembangan Kurikulum Kerangka Kualifikasi Nasional Indonesia*, KKNI) refers to national education standards: content standards, processes, graduate competencies, education personnel, facilities and infrastructure, management, financing, and educational assessments. The socialization of the model was conducted by lecturers assisted by the local government.

In the implementation, the teachers are expected to improve their creativities and use various models of learning, one of which is Jigsaw technique. Jigsaw cooperative learning technique excels in helping learners to understand the difficult concepts. Cooperative approach which is an integral part this technique also gives effect to the attitude acceptance of difference between individuals, either race, cultural diversity, gender, socio-economic, and others. In addition, most importantly, cooperative approach teaches cooperative skills in group or teamwork. This skill is needed by the learners when they come to the society.

There are 6 major steps in implementing a cooperative approach, as revealed by Slavin (2009). The six steps are: the approach begins with the lecturer conveying the purpose of the approach and motivating the students to learn. This step is then followed by the presentation of information either in the form of reading material or other verbal information. After that, the students are grouped into study groups. This stage is followed by guidance by the teacher when the students study in groups. After that, the teacher evaluates the things they have learned and then rewards the efforts that individuals and groups have made.

Holubec in Nurhadi et al (2003) states that a cooperative approach is a learning approach through small groups of students to work together in maximizing learning conditions in achieving learning objectives. In other words, a cooperative approach is a learning that consciously and systematically develop sharing-knowledge, sharing-love, and caring-each-other (Sundanese/Indonesian: *silihasah, silihasih, silihasuh*) interaction. Meanwhile, Bruner in Siberman (2000) explains that joint learning is a fundamental human need to respond to other human beings in achieving a goal.

According to Nur (2000), all approaches are characterized by the structure of tasks, goals, and rewards. The task, objective, and reward structure of Jigsaw, however, differ from others. In the learning process using Jigsaw, the students are encouraged to work together on a joint task and they must coordinate their efforts to complete the tasks assigned by the teacher. The purpose of the cooperative approach is to improve the learning results and active participation of the students, enhance the students’ acceptance on various diversities from their peers, and develop their social skills.

Factors involving the students include the nature of intelligence he has. The intelligence of each student will affect the student's own learning outcomes or results. The advantages of Jigsaw are: (1) helping the students learn to think from the point of view of a subject by giving them freedom in the practice of thinking, (2) helping the
students to evaluate logic and evidence for their position or other positions, (3) giving the students the opportunity to formulate the implementation of a principle, (4) helping the students to recognize a problem and formulate it using information obtained from reading or lecturing, (5) using materials from other members of the group, and (6) developing motivation to learn better.

There are several ways to improve the quality of Social Science learning, one of which is the selection of learning models. Lecturers as one of sources of learning always try to provide the best way of delivering the subject matter. In order for proper teaching and learning process, lecturers as the spearhead in the achievement of educational goals, need to choose effective and efficient learning strategies. Effective approach management is an early step in the success of learning that will ultimately increase students’ active participation and achievement.

The researchers, who are also lecturers in the F 2015 class, found an issue that arose in the Elementary Social Science subject, a subject for college students to teach Social Science to the elementary students. Based on the experience of lecturers in the previous years, the students did not understand the materials and the learning results did not achieve the passing grade. This can be seen from their test and task scores. The average score was below 70, which is the passing grade, while the works done were still not understood by the students during the presentation. In addition, the students’ participation during the teaching learning process was not optimal as the dominant method of lecturing was still lecture method.

Considering the unsatisfied results of the lesson, hence to form and apply the pattern of thought and action more optimal, the researchers tried to implement Jigsaw through classroom action research (CAR) activities to solve the problem. This model generally applies a small group discussion system between 4-5 people. The learning steps of Jigsaw cooperative model can be seen in Figure 1 (Arends, 1997):

The steps of implementing Jigsaw are as follows:
- The teacher divides the class into groups, each group consists of 4-6 students heterogeneously for the original groups.
- From the original groups, the students are divided once more to form expert groups and each group discusses a single piece of learning material.
- In the group of experts, the students discuss the same learning materials section, as well as devise a plan how to convey to their friends when returning to the
original group. Each member of the expert groups will return to the original groups and providing information that has been obtained or learned within the expert groups.

- The teacher facilitates group discussions for both expert groups and original groups.
- After conducting discussion in both groups, the students have to present their findings and conclusion in front of the class.

By improving the Elementary Social Science in the F 2015 class using Jigsaw cooperative model, it was expected that the students improved their learning quality, which in turn improved their learning results or even better.

METHODS

This research applied qualitative descriptive approach since the condition being investigated met some qualitative research characteristics, those are: (1) data were obtained directly and in accordance with reality in the field; (2) the researchers played multiple roles as planner, implementer, data collector and data analyzer; (3) this is a descriptive research, since the data collected were in the form of words or sentences, (4) this research is more concerned with the process rather than the result, because the relationship of the parts studied was much more obvious when being observed through the process, (5) data analysis tended to be inductive, ie the search for data was not intended to prove the hypothesis that had been formulated prior the research, but rather the formation of abstractions was based on the parts that had been collected.

This is a Classroom Action Research (CAR), because the problems arise came from the practice of learning in the classroom which then performed the action of reflection (thinking back to the learning process that had been run) to improve the quality of the students’ learning. In this study, the researchers and the lecturer worked together so that the researchers were directly involved in planning and executing actions, analyzing data and reporting on outcomes. The research design of this CAR used Kemmis and Taggart’s, as described in the picture below:

![Classroom Action Research design](Arikunto,2006:93).

In the implementation of Kemmis and Taggart’s CAR design, every cycle consists of 4 stages which include: 1) Planning, 2) Action, 3) Observation, 4)
Prihatin et al: Improving The College Students’ Learning Results And...

Reflection. The data obtained in this study were in the form of observation data, from learning results, interviews, documentation, and field notes.

Table 1. Instruments for collecting research data

<table>
<thead>
<tr>
<th>No</th>
<th>Data Type</th>
<th>Data Collection Technique</th>
<th>Data Collection Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Learning activities</td>
<td>Observation</td>
<td>Observation sheets</td>
</tr>
<tr>
<td>2</td>
<td>Learning Results</td>
<td>Tasks and tests</td>
<td>Tests</td>
</tr>
<tr>
<td>3</td>
<td>College students’ responses</td>
<td>Interview</td>
<td>Interview sheets</td>
</tr>
<tr>
<td>4</td>
<td>Learning activities</td>
<td>Observation</td>
<td>Field note sheets</td>
</tr>
</tbody>
</table>

These data were then analyzed quantitatively to calculate the scores and the percentage of success and qualitatively to describe the data.

RESULTS AND DISCUSSION

Before conducting the research, the researchers prepared: a teaching plan based on the Jigsaw learning model, learning activity sheets, and data collection instruments. In taking the observation data, the researchers were assisted by an observer, while the researchers as lecturers implemented the research. The learning was done by working in groups where the lecturers divided the tasks of each member to minimize the possibility of group members who were not actively involved in learning. In general, all of the students followed every learning step planned by the researchers, although there was still a small part of them who had not actively involved in the group discussion.

The results of the analysis of the students’ learning activities showed improvement from Cycle 1 to Cycle 2, which can be shown in Table 2 below:

Table 2. The students’ active participation during the implementation of the research

<table>
<thead>
<tr>
<th>No</th>
<th>Learning Activity</th>
<th>Cycle 1</th>
<th>Cycle 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Active Students</td>
<td>Percentage</td>
</tr>
<tr>
<td>1</td>
<td>Expressing opinions</td>
<td>15</td>
<td>40%</td>
</tr>
<tr>
<td>2</td>
<td>Cooperating</td>
<td>31</td>
<td>82%</td>
</tr>
<tr>
<td>3</td>
<td>Listening</td>
<td>28</td>
<td>74%</td>
</tr>
<tr>
<td>4</td>
<td>Presenting</td>
<td>34</td>
<td>89%</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>27</td>
<td>72.25%</td>
</tr>
</tbody>
</table>

Based on Table 2, the average of the students’ participation in Cycle 1 was relatively unimpressive, as there were only 27 active students or 72.25% of the population, although it was important to note that it already achieved the criteria of success, which is 70%. Cycle 2, however, saw an increase of participation as there were 32 active students or 83% of the population. Based on the result of interviews with the students about the learning activities, most of them felt that the learning activities were fun because the involvement in group discussions gave them the freedom to express opinions and most importantly the lesson was not boring and honed the level of thinking activity. In addition, although the result of the data from field notes showed that Cycle 1 already achieved the criteria of success, the encouragement of togetherness and the attention of the lecturers towards the college students’ learning activities were not yet
maximal. It was shown from the fact that there were some students who were less focused on the learning; some were talking about other things outside the discussion material and some were busy playing their smart phones.

The college students’ scores also saw a promising progress from Cycle 1 to Cycle 2, which can be seen from Table 3 below.

**Table 3. The students’ achievement**

<table>
<thead>
<tr>
<th>No</th>
<th>Achievement</th>
<th>Cycle 1</th>
<th>Cycle 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number of students</td>
<td>Percentage</td>
</tr>
<tr>
<td>1</td>
<td>Achieved*</td>
<td>26</td>
<td>68%</td>
</tr>
<tr>
<td>2</td>
<td>Not achieved*</td>
<td>12</td>
<td>32%</td>
</tr>
<tr>
<td>3</td>
<td>Average score</td>
<td>73,25</td>
<td></td>
</tr>
</tbody>
</table>

*Note: Achieved/not achieved the passing grade*

Based on Table 3, it was shown that on the first cycle there were 26 students who achieved the passing grade, and 12 who did not, or 68% : 32%, while the average score in Cycle 1 was 73.25. Since the passing grade was 70, then it could be concluded that the average score of the class already achieved the passing grade. However, since the percentage of the students who achieved the passing grade was only 68% while the criteria of success was 75%, it could be concluded that the F 2015 class failed, and second cycle was conducted.

In Cycle 2, however, the students showed a promising progress, as there were 33 students who achieved the passing grade and 5 who did not, or 87% : 13%, while the average score was 84.5. Therefore, it could be concluded that the students achieved the criteria of success.

Based on the above explanation, it was shown that each step of Jigsaw had been done, but the implementation of each cycle was still weak, especially in Cycle 1 which was shown from the average score and number of the students who achieved the criteria of success. This was led by several factors, namely: 1) the college students’ learning motivation was still relatively weak since there were no emphasis to each member to be active during the group discussion, 2) attention of the lecturers to the students’ activities was also weak, proven from the lecturers’ reluctance to check every group and monitor their learning activities, 3) the students still lacked focus and tended to do other activities such as talking with other friends outside the discussion material and played smartphones during the discussion. However, these students still showed an improvement since the implementation of Jigsaw provided a unique learning experience where they analyzed the material themselves and exchanged opinions about it with their group members. This is in accordance with the results of the students’ responses that showed a positive response related to the implementation of Jigsaw.

A good increase in learning results and active participation in Cycle 2 indicated that the successful implementation of learning models could not be done only once but needed repeated executions to found the real problems. It was also important to note that in the early implementation, the students took a lot of time to familiarize themselves with this teaching technique and needed guidance even at each step of the activity so there was a problem with the time efficiency.
CONCLUSION
Based on the above explanation, it could be concluded that the implementation of Jigsaw cooperative model increased the students’ active participation from 72.25% or 27 students in Cycle 1 to 83% or 32 students in Cycle 2. The average score of the students also saw progresses from 73.25 in Cycle 1 to 84.5 in Cycle 2. A positive response was also revealed from the interviews and observation. These students found that the learning using Jigsaw was more enjoyable than usual.

As for the suggestions, the implementation of Jigsaw needs a good preparation so that each step can be implemented optimally and efficiently. Motivation and monitoring the learning activities should be more emphasized so that students will be triggered to be more active.

REFERENCES