



Implementation of Case Based Learning through the GeoSMART Approach to Increase Student Participation in Geography Learning

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Abstract. This article was written to analyze the implementation of Case Based Learning through the GeoSMART approach to increase student participation in Geography Learning at Senior High School of Labschool UNP. This type of research is classroom action research with the research subjects being 34 students of class XII IS 4. people. This research uses the Lesson Study for Learning Community/LSLC method and is carried out in three cycles which include, 1) Plan, 2) Do, 3) See. The method applied is Case Based Learning through the GeoSMART approach which focuses on student participation during learning. Student participation data was obtained through assessment instruments and rubrics as well as interviews. The results show that after carrying out Case Based Learning through the GeoSMART approach for three cycles and reflecting on the notes and recordings of learning observations with the observer, in each cycle there was a positive improvement.

Keywords: Case Based Learning, Geography Learning, Student Participation.

1. Introduction

The 21st century and the Era of Industrial Revolution 4.0 and Society 5.0 are marked by increasingly challenging life and the emergence of opportunities and new things that are disruptive. This condition must be addressed wisely. Accuracy in anticipating situations is the key to a country's success. Education as an instrument of change must carry out transformation in order to be able to prepare future generations who are not only intelligent and strong but also able to adapt to existing changes [1], [2].

Learning in the 21st century must transform from learning that focuses on basic knowledge/skills to applied skills. Studying core subjects alone is not sufficient if it is not accompanied by discussing "21st Century Themes" such as global awareness, financial, economic, business and entrepreneurial literacy, civic literacy and health literacy (www.21stcenturyskills.org). If so far, education has prepared the young generation for certain jobs/professions, now schools are tasked with preparing the young generation to

create those jobs/professions themselves. 21st century learning must be able to equip students with high-level, creative and innovative thinking skills as well as communication and collaboration skills. Learning that is only limited to the transfer of knowledge from the teacher (teacher-dominated classroom) and students as absorbers of knowledge (passive absorbers) is certainly no longer relevant to current conditions.

However, facts on the ground show that learning in most schools in Indonesia is still on the conventional spectrum characterized by; 1) presentation/cramming of material by the teacher, 2) minimal space for students to convey thoughts and ideas, 3) interaction between students is still lacking, 4) transfer of knowledge [2]. Teachers still focus on what knowledge students have after studying certain material, not what abilities students can do after knowing something (generative learning). If learning continues like this, it is feared that students' high-level thinking abilities will be difficult to develop and Indonesian students will remain at the lowest level in world education quality surveys such as PISA and others.

One effort that can be made to create learning that is in line with the demands of the 21st century is to increase student participation in learning. The research results of Ferguson - Hessler de Jong in Abdullah & Mahbob [3], prove that students who actively participate in class tend to have better academic achievements. Student participation in learning will create a more enjoyable and meaningful learning experience and feel more satisfied in learning [4]. Furthermore, active participation in discussions is important for achieving learning goals and plays an important role in educational success [5], and developing students' personalities [6]. Student participation in class will train them to think critically and develop intellectually [7], and support the creation of effective classes [8].

Case based learning is a learning method derived from the Problem Based Learning Model which focuses on increasing student participation in learning, especially in solving a problem or case. The case method was practiced at Law School, Harvard University in 1870 and was followed by the Business School in 1920. This is based on the fact that the lecture method alone is not enough to teach professional and critical thinking skills and prepare them for real life (www.ctl.columbia.edu). According to [9]–[11], the case method is "an active form of instruction that focuses on a case and involves students learning by doing...". In the case method, students actively and focused discuss real cases in effective and mutually reinforcing groups [12].

From the description above, it can be seen that the teacher's role has changed to become a learning facilitator who distributes cases to be analyzed, asks students to find and share cases to be discussed in class, manages discussions and provides instructions. Meanwhile, the student's role is as the main actor (protagonist), being an active listener, asking follow-up questions, validating other students' input, taking notes and recording the main points of the discussion and reflecting on learning.

Case-based learning has been proven to increase student perception and participation to achieve learning goals [13], increase student involvement, develop critical thinking skills, make connections between information and see problems from various perspectives [14]. Learning using the case method bridges theory with practice, active listening, constructive opinions, developing metacognitive thinking skills and reflective thinking [15].

The GeoSMART approach used in research, SMART here means the following:

1. S = Scientific. This means using a scientific approach that begins with observing facts, asking questions, processing, analyzing and presenting.
2. M = Measurable. This means that Geography learning must have measurable learning outcomes and be oriented towards high-level thinking abilities (HOTS).
3. A = Applicable. This means that the content learned can be practiced in real life.
4. R = Reasoning. This means optimizing reasoning power
5. T = Technology. This means that technology is not just a medium but a driver of learning and even the learning content itself.

In this article, the results of classroom action research are written entitled Implementation of Case Based Learning through the GeoSMART Approach to Increase Student Participation in Learning Geography on the material of Village and City Spatial Patterns. Participation observed in this research included, 1) attention to learning, 2) use of learning resources, 3) asking questions, 4) having opinions and 5) collaborating. This participation indicator was modified from An Assessment Rubric for Class Participation [16].

2. Methods

This research is classroom action research that applies Case Based Learning through GeoSmart Learning. The goal of this research is to increase student participation in learning. The model used is the Kemmis & Taggart Model which has steps, namely, 1) planning which includes activities of analyzing learning problems, exploring the causes of problems, formulating solutions, designing lesson plans and research instruments as well as confirming the duties of teachers and observers, 2) Action (acting) . This action uses Case based learning steps which are characterized by three main student activities, namely, 1) individual activity (pre-existing material), 2) group discussion and 3) classroom discussion

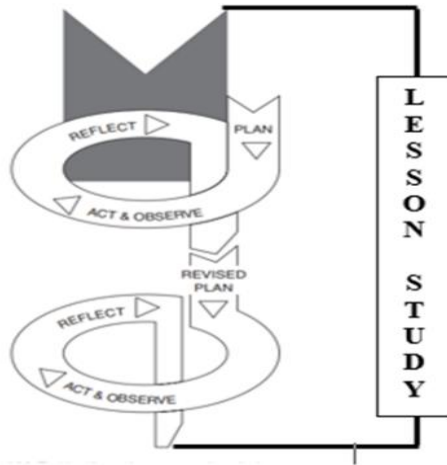


Fig 1. Kemmis & Taggart's Action Research Model Based on LSLC

The implementation of this classroom action research is strengthened by the principles of Lesson Study for Learning Community where one learning cycle is a series of LSLC activities, namely, 1) Plan, 2) Do, 3) See. Although classroom action research generally uses a qualitative approach, quantitative data about student participation will be described in percentage form.

This research was carried out at the Universitas Negeri Padang Labschool. The input variable was class XII IPS 4 students, the process variable was Case Based Learning and the output variable was student participation. Student participation data was collected using student participation assessment instruments and rubrics and analyzed using percentage techniques. Qualitative data is presented in the form of narratives from interviews with teachers and learning observers.

However, developing a tourist village necessitates more than just one consistently operational tour. Therefore, this study comprehensively assesses the characteristics of tourism in Samar Village, the factors that exert influence on the sustainability of tourism in the village, and formulate a sustainable tourism village development strategy. However, this study primarily focuses on identifying stakeholders in developing rural tourism. In identifying stakeholder roles and formulating a strategy for village tourism initial development, the penta-helix synergy model in ecotourism was performed, adapted from research [10]–[12].

3. Results and Discussions

Student participation referred to in this research includes:

Table 1. Attention to learning

No	Attention to learning	Description
1	Low	Pays little attention to learning
2	Medium	Attention to learning but is unstable
3	High	Pays attention to learning steadily

Table 2. Utilization of learning resources

No	Utilization of learning resources	Description
1	Low	Does not have/bring books or other learning resources
2	Medium	has/carries books or learning resources but is not using them optimally
3	High	Have/bring books or learning resources however and make optimal use of them

Table 3. Ask

No.	Ask for information	Description
1	Low	Never ask questions during learning
2	Medium	Asks at least once during the lesson
3	High	Ask more than once during the lesson

Table 4. Have an opinion

No	Opinion Information	Description
1	Low	Never has an opinion during learning
2	Medium	Expresses opinions at least once during the lesson
3	High	Expresses opinions more than once during learning

Table 5. Collaborate

No.	Collaborate	Description
1	Low	Not involved in collaborative activities in the group
2	Medium	involved in collaborative activities but as a follower
3	High	Involved in collaborative activities as a collaboration initiator

This student participation indicator was developed from the Class Participation Rubric proposed by Craven & Hogan [16]. The author makes adjustments according to the needs and objectives of the research. Below is presented the development of each indicator of student participation in learning.

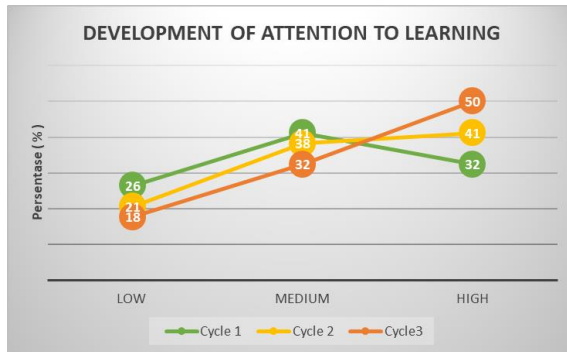


Fig 3. Students' attention to learning

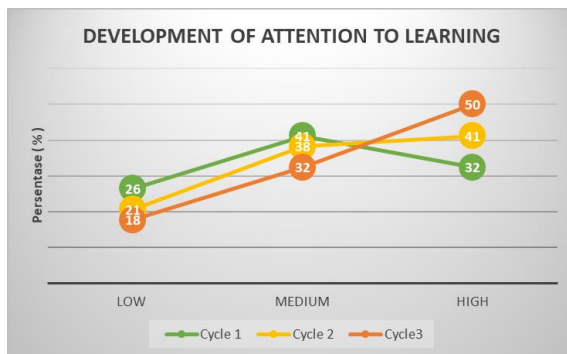


Fig 4. Utilization of Learning Resources

Based on Figure 3, it can be seen that the percentage of students who showed attention to learning in the high category increased from cycle 1 to cycle 3. The data moved from 32%, then to 41% and finally reached 50%. Likewise, the indicators for the use of learning

resources by students are that in cycle 1 students in the high category were only 24%, then in cycle 2 it was 38% and in cycle 3 it reached 41%. Even though these two indicators have not reached more than 50%, the increase in the percentage of students in the high category is quite satisfactory.

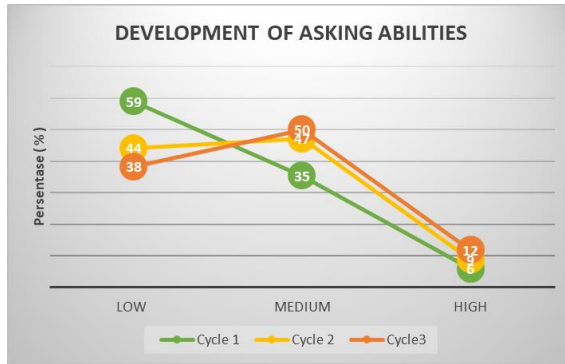


Fig 5. Asking

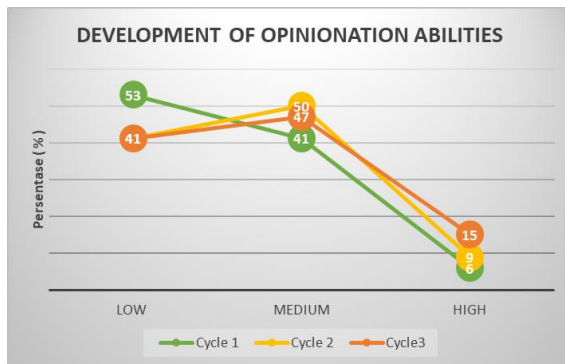


Fig 6. Opinion

Furthermore, if we look at the indicators, the percentage of students who ask questions in learning in cycle 1 is 6%, then becomes 9% in cycle 2 and rises to 12% in cycle 3. This percentage is students in the high category or who ask more than once. Meanwhile, for the opinion indicator, in cycle 1 it was 6%, in cycle 2 it was 9% and in cycle 3 it was 15%. This opinion indicator means students who provide answers or responses to questions or opinions of other students.

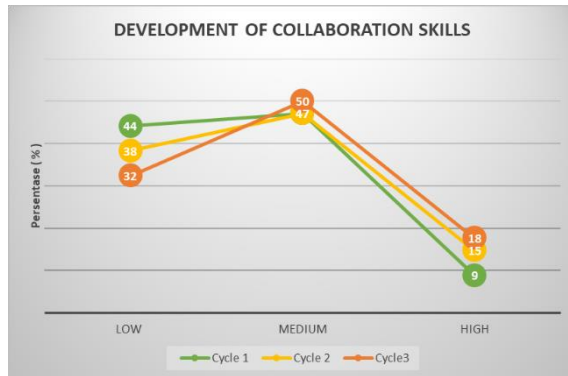


Fig 7. Development of Collaboration

Based on the collaboration indicators as shown in Figure 7, students who were in the high category or involved in collaborative activities as collaboration initiators were 9% in cycle 1. Then it became 15% in cycle 2 and rose to 18% in cycle 3.

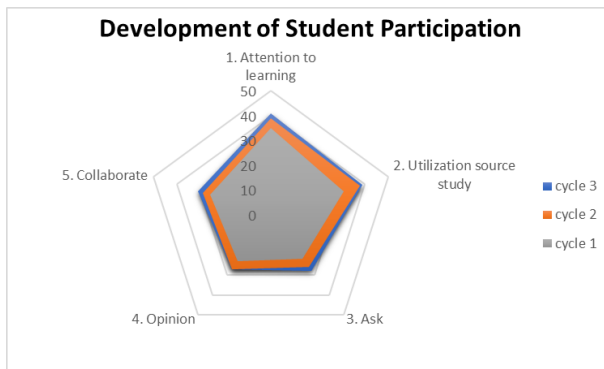


Fig 8. Recap of Student Participation Indicators

After carrying out three cycles of Case Based Learning and reflecting on the notes and recordings of the results of learning observations with the observer, in each cycle there was a positive improvement. subject teachers said that the application of the case method made students confused at the beginning of the cycle because of changes in learning patterns. Discussions between group members encourage students to defend and articulate their ideas, promoting their mastery and engagement [17]. Student participation will increase if teachers provide a structured learning environment [18].

Participation observed in this research includes, 1) attention to learning, 2) use of learning resources, 3) asking questions, 4) having opinions and 5) collaborating. This participation indicator was modified from An Assessment Rubric for Class Participation [16]. Student

participation has proven academic success and critical thinking skills [19], a sense of belonging [20], reduced anxiety about not being able to understand the material [20], [21]. Student participation in the classroom is influenced by self-efficacy [22] and a sense of social belonging [23].

4. Conclusions

After carrying out three cycles of Case Based Learning through the GeoSMART Approach and reflecting on the notes and recordings of the results of learning observations with the observer, in each cycle there was a positive improvement. This proves that case based learning can be an alternative that can be used in learning.

Authors' Contributions

Nofrion as researcher, Rahmanelli as developer, Erwin Pri Utomo and Sukron Operma as research assistant.

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