

Activity-Based Learning to Increase Self-Regulation in Elementary School

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1. Abstract

This research was motivated by the low learning independence of fifth grade students. The purpose of this study was to describe efforts to increase fifth grade students' independence through Activity-Based Learning on natural science content. This type of research is Collaborative Classroom Action Research, which uses the research design developed by Kemmis and McTaggart. There are four phases: (1) planning, (2) action/action, (3) observation, and (4) reflection. The research was conducted in up to two cycles. The subjects of this study were 28 students in fifth grade. This action research was conducted in the even semester of the 2022/2023 school year. The data collection techniques used in this study were observation, questionnaires, and document studies. The data analysis techniques used were quantitative and qualitative. The results of this study show an increase of 20.54 from cycle one, namely 63.61 to 84.15 in cycle two. The data shows that students' independence in learning increases due to a change in attitude for the better. Activity-Based Learning is tailored to the students' profile so that it meets their learning needs. Increasing students' independence in learning independence can impact self-quality, learning outcomes, and the development of various skills that students need to possess in the 21st century. Meaningful learning is the key to success in education.

Keywords: *Activity-Based Learning, Independent Learning, Elementary School*

2. Introduction

The 21st century requires people to improve their quality of life. Improving the quality of life aims to enable people to face the increasingly complex competition of the 21st century. One way to improve quality of life is to improve attitudes and skills acquired through education. Education is expected to be a medium for developing 21st century attitudes and skills so that students have life skills. The 21st century attitudes and skills are relevant to the four pillars of education proposed by UNESCO. Education includes learning to know, learning to do, learning to be, and learning to live together. The four pillars include attitudes and skills that need to be developed in the 21st century through learning activities in education. Educational activities in the 21st century are inseparable from learning that places more emphasis on developing aspects of attitudes, knowledge, and skills.

However, there are problems in 5th grade learning. In science learning, students are still very dependent on examples and teacher help. As a result, students' independence is less. In addition, in science learning, which is not yet activity-oriented, students' dominant visual and kinesthetic characteristics are less encouraged. Learning independence is important for elementary school instruction because it involves developing the ability to manage, direct, and control oneself as an independent individual (Wulandari 2015). Independent learning requires responsibility, initiative, critical thinking, strong determination, and the ability to accept consequences (Fitriani & Yusri, 2022). High levels of learning independence will have an impact on increasing critical thinking skills. Independent learning and critical thinking skills are attitudes students must possess in the 21st century. Self-directed learning is a key factor in learning success (Field, Duffy, and Huggins, 2015).

Low student learning independence is a problem that needs to be addressed immediately. Activity-Based Learning is an alternative to increase student learning independence. Activity-based learning has many structured activities that can develop aspects of attitudes, knowledge, and skills. Activity-Based Learning is also effective for student-centered learning activities. The Activity Based Approach in Learning is much more effective for developing higher order skills in students than the ordinary approach of teaching (Farkhunda et. al., 2021). Suparno et. al. (2018), the method of Activity-Based Learning (ABL) had a significant effect on students' self-direction in learning. In fact, the ABL method was more effective in improving self-direction than the traditional model. Thus, the Activity-Based Learning (ABL) method can be a solution to the problem of students' self-directed learning.

In this light, Activity-Based Learning can be a solution to students' low self-direction in learning. Some researchers focus only on the improvements achieved. There are few studies that focus on increasing students' independence in learning and that focus on students' characteristics and learning needs to make learning more meaningful. Therefore, researchers focused on student profile learning to increase learning independence. The purpose of this study is to describe efforts to increase the independence of grade 5 students through Activity-Based Learning in science subjects in Yogyakarta.

3. Methods

3.1. Participants and Context

The study was conducted in Yogyakarta. The subjects of this study were 28 grade 5 students, including 14 female and 14 male students. The investigation was conducted as

Collaborative Classroom Action Research. The research activities took the form of initial observations followed by the creation of research instruments. This action research was conducted during the even semester of the 2022/2023 school year. In conducting this collaborative action research in the classroom, the research design developed by Kemmis and McTaggart was used. There are four phases: (1) planning, (2) action/action, (3) observation, and (4) reflection. After a series of cycles have been conducted and reflected upon, re-planning follows as a separate cycle if the research has not met the success criteria.

3.2. Material

The data collection techniques used in this study are (a) observation, an instrument used to record data on behavior, activities, and other processes in the research; (b) questionnaire, a series of questions or written statements to be answered by students to obtain data on students' independence in learning based on statements about indicators; (c) study of documents, i.e., profile data useful for material analysis to design learning.

3.3. Data Collection and Analysis

Qualitative and quantitative data analysis techniques are used in this study. The qualitative data contains explanatory sentences taken from the results of the researcher's observations of the students during the learning activities and then analyzed descriptively and qualitatively. The stages of data analysis can be divided into four parts, namely, data collection, data reduction, data display, and conclusion. The things that were analyzed in

this study include observational data on science learning. The data obtained are then described in detail so that conclusions can be drawn. Quantitative data in the form of numbers taken from the results of calculating the score after learning are processed using a percentage description method. Quantitative analysis was performed to determine the changes that occurred before and after the action.

4. Results and Discussion

4.1. Result

Based on the results of the observations, Grade 5 students' learning independence increased from Cycle I to Cycle II.

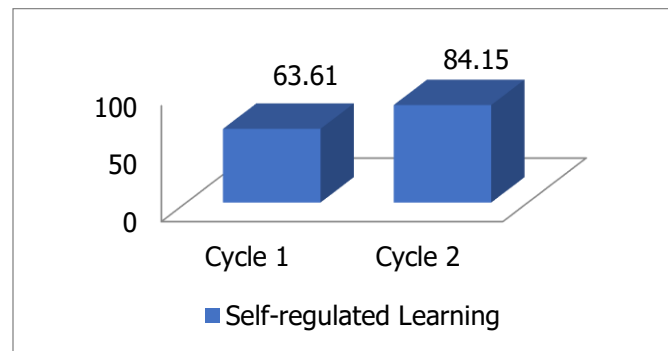


Figure 1. results of the analysis of learning independence

From the above graph, it can be seen that students' learning independence has increased by 20.54%. In cycle I, students' learning independence is moderate because it is in an interval of 51% -75%. In cycle II, on the other hand, students' learning independence is high, because it is in an interval of 76% -100%. Thus, the increase in students' independence in learning seems to be quite significant.

The above increase in students' independence in learning is determined by the following data.

Table 1. Analysis of Students' Increasing Independence In Learning Based on Indicators

Indicator	Cycle I	Cycle II	Gain
Self-confident	60.71	80.35	19.64
Active	69.64	82.14	12.50
Discipline	61.60	89.28	27.68
Responsibility	62.50	84.82	22.32

Table 1. shows that the highest increase is in discipline, which is 19.64. In addition, the indicator for sense of responsibility is 22.32, for self-confidence is 19.64, and for activity is 12.50. The data show that students' self-reliance is increasing due to a change in attitude for the better. Below is an overview that illustrates the improvement in each indicator.

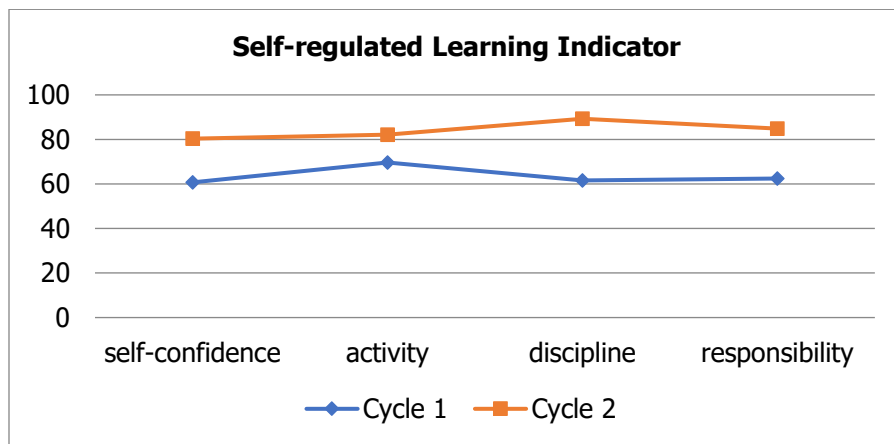


Figure 2. indicators of increasing learning independence

4.2. Discussion

The first step the researcher took before acting was to make observations and create a student profile. Profiling helps researchers to identify students' characteristics, learning styles, interests, and learning needs. Based on the results of profiling, the following learning styles were identified: (a) 10 students visual, (b) 8 students audiovisual, and (c) 20 students kinesthetic. In addition, 19 students liked group activities, while the other 9 students preferred individual activities. Students' interests also varied: 10 students liked drawing activities, 13 students liked hands-on activities, and 5 students liked making learning works/products. This is useful for planning the actions I will take.

This classroom action research was conducted in two cycles, with two meetings in each cycle. Each meeting was 4 x 35 minutes of learning. Different activities were used depending on the topic of the learning activities, including observation, discussion, demonstration, experimentation, and crafts. In each learning activity, students perform activities that can promote students' independence in learning. This is consistent with Mehmood's (2021) opinion that the learning activity should be intentional, meaningful, and useful. Activities should build on prior knowledge. They should allow students to engage in these activities and develop their skills, knowledge, and understanding. So in designing learning, teachers really need to pay attention to that. Learning is designed using technology and concrete objects to support students' learning needs. All activities are student-centered. The teacher acts as a facilitator and motivator.

Activity-based learning is a solution to increase children's independence in learning. This is supported by a study conducted by Anwer (2019), which demonstrates a positive effect of activity-based instruction on the development of motivation and improvement of academic skills in higher secondary students. The statement of Shah and Rahat (2014)

states that the implementation of ABL encourages students to actively participate in the learning process. Moreover, the moral content is easy to understand and students participate in the learning process. Activity-based learning is a hands-on experiential method for learners to analyze and learn from the activity (Lijanporn & Khlaisang, 2015). Direct learning with different activities that match students' characteristics is easier to understand. These learning activities become meaningful learning.

In Cycle I, the main activity of the students was to experiment with the material provided by the teacher. According to the observations, they were quite confident and active in the activities. However, the level of independence and responsibility for the material provided is still low. The students make the best use of the material, but they seem less orderly when experimenting. The activities become less conducive because they lack a sense of responsibility for the activities they perform. Susilowati (2018) argues that students who have good learning independence must also have good motivation. The still lack of independence is the reason for the lack of learning success in cycle I. This is a note from the researcher as a consideration to improve further learning activities.

In the cycle II, students conducted experiments, but they brought all the needed materials by themselves. In groups, they share the tasks according to their abilities. The result looks very different from the previous cycle. The students make a very good impression in preparing the material to be used. They are also more disciplined and responsible. They have experimented with their creativity by making the best use of the materials available. The experimental results were very different. This shows the rapid progress in students' independence. In accordance with Agok's (2016) opinion that independence or autonomy is the ability to freely control and regulate one's own thoughts,

feelings, and actions and to try to overcome feelings of shame and doubt. Giving students purposeful freedom has a positive effect on independent learning.

Overall, the II cycle went well and achieved its goal. Therefore, the researcher decided to end the research as the research indicators had been achieved. This is indicated by a 20.54% increase from Cycle I to Cycle II. The researcher concludes that the use of Activity-Based Learning can increase student independence in learning.

The results of this study are consistent with Celik's (2018) research findings that activity-based instruction in mathematics classrooms can increase students' academic achievement compared to traditional instruction. Activity-based learning successfully increased students' academic achievement. The goal of independent learning is not individual learning, but a learning process that requires the student to be independent in learning (Astuti, 2016). Independence is also interpreted as the ability to take initiative, be able to solve problems, and have confidence in learning activities (Syamsu & Bachtiar, 2015). This is also consistent with (Tezer et al., 2019) that learning independence can be interpreted as an attitude, willingness, and ability to engage in active learning activities driven by the desire to master a given skill. Therefore, it is very important to develop students' learning independence.

Developing students' independence in learning is the same as teaching life skills. Students who have high learning independence will find it easier to solve various challenges in the future. They will have a high level of confidence in solving problems. They will not always have to rely on others. Through independence, students develop into individuals with a growth mindset. The growth mindset is one of the attitudes that everyone must have in the 21st century. The 21st century requires us to be independent and creative in

order to continue to grow. Therefore, teachers must teach students independence since elementary school begins with classroom learning.

5. Conclusion

Based on research that has been done, Activity-Based Learning can increase student learning independence by 20.54%. Activity-Based Learning is tailored to student profiling so that it can meet their learning needs. Students carry out activities that can develop their skills. This can be seen through the increase in each indicator of student learning independence. Increasing student learning independence can affect self-quality, learning outcomes, and the development of various skills that students must have in the 21st century. Meaningful learning is the key to success in education.

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