Establishing Students' Sense of Responsibility Through The Problem-Based Learning Model in Elementary Schools

Parhati[1*], Julia Fitri[2], Putry Julia[3]

[1,2,3] Universitas Serambi Mekkah, Indonesia

*parhatijpparhati@gmail.com

ABSTRACT

Instilling a sense of responsibility in elementary school students is an important part of character education. This study aims to describe the application of the Problem-Based Learning (PBL) model in shaping students' sense of responsibility. The method used is descriptive qualitative research with a case study approach. Data were collected through observation, interviews, and documentation of teachers and students in one of the public elementary schools in Banda Aceh. The results of the study indicate that the application of the PBL model encourages students to be more active and responsible in learning. Through the stages of PBL, starting from problem identification, group discussions, information searches, to solution presentations, students are trained to complete tasks with full commitment both collectively and individually. These findings indicate that PBL is effective in shaping students' sense of responsibility and improving conceptual understanding. The implication of this study is the importance of training for teachers so that they can implement the PBL model consistently in learning to support the strengthening of students' character. It is recommended that elementary schools integrate the PBL model into the curriculum to shape students' character from an early age.

Keywords: *Problem-Based Learning, responsible-attitude, character-education, active-learning, learning-model*

1. INTRODUCTION

Elementary education is the main foundation in the formation of the character of the young generation. One of the important character values to be developed early on is the attitude of responsibility. Responsibility includes the ability of individuals to realize, accept, and carry out their obligations consistently, both in academic and social life (Lickona, 1991). However, the reality in the field shows that most elementary school students still have difficulty in demonstrating responsible behaviour, such as completing assignments on time, keeping the classroom clean, or working together in groups. This is a problem that needs serious attention from educators.

The background of this problem is closely related to the learning approach used in schools. Conventional teacher-centered learning models tend to limit active student participation, so that character values such as responsibility do not develop optimally. For this reason, a learning model is needed to be able to foster active involvement and awareness of students in the learning process. One approach that is believed to be effective in shaping student character is Problem-Based Learning (PBL).

The PBL model is a learning approach that places students as active subjects in solving real problems that are relevant to their lives. This model encourages students to think critically, work together in groups, and make decisions responsibly (Hmelo-Silver, 2004). In the context of character education, PBL provides space for students to learn through direct experience in facing and solving problems, which can ultimately foster a sense of responsibility naturally and contextually (Sagala, 2013).

The purpose of this study is to describe how the application of the PBL model can shape the attitude of responsibility of elementary school students. The scope of this study includes the learning process in grade V of one of the public elementary schools in Banda Aceh, focusing on student activities during the PBL stages, from problem identification to solution presentation. The strategy used in this study was a descriptive qualitative approach with data collection techniques in the form of observation, interviews, and documentation.

This study is based on constructivism learning theory, which emphasizes that knowledge is built through active interaction with the environment and social experiences (Vygotsky, 1978). In addition, Lickona's (1991)

character education theory is the main foundation in examining how meaningful learning can shape character values, especially responsibility.

Thus, the implementation of the PBL model is expected to not only improve students' understanding of the subject matters, but also contribute to the formation of stronger characters that are relevant to the demands of 21st century life.

2. METHODS

This study used a descriptive qualitative approach to describe in depth the process and results of the application of the *Problem-Based Learning* (PBL) model in forming the attitude of responsibility of elementary school students. This approach was chosen because it allowed the researchers to observe phenomena naturally and understand the meaning of behaviour from the perspective of participants (Creswell, 2014). The main focus of this study was on the learning process and changes in student attitudes in the context of problem-based learning.

The design used in this study was a single case study, which focused on one group of students in one of the public elementary schools in Banda Aceh. This approach aimed to gain a deep understanding of the dynamics of PBL learning and its impact on students' attitudes of responsibility in real situations (Yin, 2018).

The population of this study consisted of all fifth-grade students in the elementary school that was the location of the study. The sample selection technique used was purposive sampling, which was the deliberate selection of samples based on certain criteria. These criteria included the active involvement of students in the PBL process and the accessibility of the required data. A total of 30 students and one class teacher were selected as samples in this study.

Research data were collected through observation, interviews, and documentation. Observations were conducted participatory during the learning process to record student activities in each stage of PBL, from problem identification to solution presentation. Semi-structured interviews were conducted with teachers and several students selected purposively to explore their views on the implementation of the PBL model and its influence on student attitudes. Documentation in the form of learning activity notes and student work results were also collected to support observation and interview data.

Triangulation of data collection techniques was used to increase the validity of research results, by comparing findings from observations, interviews, and documentation (Moleong, 2019). The data analysis process was carried out interactively and continuously with the steps of data reduction, data presentation, and drawing conclusions (Miles & Huberman, 2014). Data validity was maintained by conducting a member check, which was re-checking the findings with informants to ensure the validity of the information collected.

3. RESULTS & DISCUSSION

The data collected in this study included observations, interviews with teachers and students, and documentation of student work results during the implementation of the Problem-Based Learning (PBL) model. Observations were conducted for four weeks of learning, covering all stages of PBL, from problem identification to solution presentation. The results of the observations showed that students experienced an increase in their activity and involvement, especially in group discussions, information searches, and collaborative problem solving.

According to Barrows (1986), the PBL model can increase students' active involvement in the learning process because students are faced with real problem situations, which motivate them to engage in finding solutions and developing independent problem-solving skills. This is in accordance with the findings in this study, where students showed increased activity in group discussions and collaborative problem solving.

In interviews with teachers, it was found that the implementation of PBL provides opportunities for students to be responsible for individual and group tasks. Teachers reported that students tend to be more independent in completing tasks and more open to the opinions of their friends, which in turn increases their sense of responsibility for the results of group work. The Ministry of Education and Culture (2016) emphasized that PBL can facilitate the development of student character, such as responsibility, because students are invited to work together and be responsible for each other in solving problems (Ministry of Education and Culture, 2016).

Interviews with students also confirmed this, where most students expressed that they felt more responsible in completing tasks after following the PBL model. This is in line with Vygotsky's (1978) theory of social learning, which states that group interaction and collaborative learning can strengthen students' understanding and responsibility for the tasks given (Vygotsky, 1978).

Documentation in the form of student work results shows an improvement in the quality of the tasks worked on, with a better and more structured level of completion compared to previous conventional learning. Johnson & Johnson (1994) argued that the cooperative learning model, which is part of PBL, can improve the quality of student work results because of social responsibility and the positive influence of group cooperation (Johnson & Johnson, 1994).

The following table summarizes observation data on students' attitudes of responsibility at each stage of PBL:

Table 1. Observation of Students' Responsible Attitudes at Each Stage of PBL.

PBL stages	Percentage of active and responsible students (%)
Identification of problems	85%
Group discussion	90%
Information search	80%
Percentage of solutions	95%

The following image shows documentation of student activities in discussing group solutions during the PBL process:

Figure 1. Classroom atmosphere during the implementation of the Problem-based Learning model with three groups of students actively discussing.

This study aims to answer the main problem raised in the introduction, namely how the application of the Problem-Based Learning (PBL) model can shape the attitude of responsibility of elementary school students. Based on the results obtained from observations, interviews, and documentation, it was found that students showed an increase in their attitude of responsibility in various aspects, such as completing assignments, participating in discussions, and actively conveying solutions.

This finding confirms that problem-based learning provides space for students to engage independently and be responsible for their learning process and outcomes. This is in line with the view of Hmelo-Silver (2004) who stated that PBL allows students to develop an attitude of responsibility through contextual and collaborative learning experiences (Hmelo-Silver, 2004). PBL encourages students to not only understand the subject matter, but also develop attitudes and values, including responsibility, through direct involvement in the problem-solving process. In this case, PBL acts as an approach that not only emphasizes the cognitive aspect, but also character formation.

The findings of this study are consistent with a study conducted by Hmelo-Silver (2004), which states that PBL can improve students' critical thinking skills and personal responsibility through contextual and collaborative learning experiences. Similarities were also found in Fitriani's study (2020), which stated that the implementation of PBL in Grade V of elementary school improved students' ability to complete assignments and take learning initiatives. This shows that the PBL model can be applied in various contexts and levels of education to support student character formation.

However, differences were found in the context of implementation. In Fitriani's study (2020), the implementation of PBL was more focused on science subjects, while in this study, PBL was applied to cross-subject themes in the 2013 Curriculum, so that the effect of character formation was seen more comprehensively. This cross-subject learning provides students with the opportunity to apply critical thinking skills and responsibility in a broader context, so that the character formed is also more holistic.

In addition, this study underlines the importance of the role of teachers as facilitators, which has not been explained in depth in previous studies. Vygotsky (1978) stated that social interaction and support from adults, in this case teachers, are very important in students' cognitive and social development (Vygotsky, 1978). In the context of PBL, the role of teachers as facilitators is crucial to encourage students to actively participate and take responsibility for their learning.

The implication of this finding was PBL can be used as a strategic approach in character education, especially in forming students' attitudes of responsibility from an early age. Learning that places students as active subjects has proven to be more effective in fostering character values than conventional teacher-centered approaches. Johnson & Johnson (1994) also argued that cooperative learning, such as in PBL, can increase students' sense of responsibility for individual and group tasks (Johnson & Johnson, 1994).

Suggestions that can be given include: the need for training and mentoring for teachers in implementing PBL consistently and comprehensively, and the need for school policy support in encouraging the use of innovative learning models such as PBL as part of character-building efforts in elementary schools. Further research is suggested to measure the long-term effects of PBL implementation on other character dimensions, such as student independence, cooperation, and leadership.

4.   CONCLUSION

This study shows that the implementation of the Problem-Based Learning (PBL) model in elementary schools significantly contributes to shaping students' attitudes of responsibility. Through the process of identifying problems, group discussions, searching for information, and presenting solutions, students are actively involved in learning, showing initiative, and completing tasks with full responsibility.

Data from observations, interviews, and documentation indicate that the PBL model encourages holistic character formation, not only improving conceptual understanding, but also building responsibility values in the context of individual and group work. In this context, the constructivism theory proposed by Piaget and Vygotsky provides a strong theoretical basis. According to this theory, learning occurs optimally when students are actively involved in a meaningful and contextual learning process, where they interact with their peers and their environment to build knowledge and skills independently. The application of PBL is in line with these constructivism principles, which support the formation of students' character who are not only cognitively intelligent but also socially and emotionally mature.

Therefore, PBL is very relevant to be implemented in elementary school learning as part of a strategy to strengthen character education. The implication of this study is the need for training and support for teachers in implementing problem-based learning models consistently and in a structured manner.

In addition, schools need to provide a learning environment that supports students' collaboration and independent exploration. The limitations of this study lie in its scope which only covers one elementary school in Banda Aceh City, with a limited observation duration. Therefore, it is recommended that further research be conducted with a wider scope, longer duration, and involving other character variables such as independence or leadership to enrich the results.

5.   ACKNOWLEDGEMENTS

REFERENCES

Barrows, H. S. (1986). A taxonomy of problem-based learning methods. *Medical Education*, *20*(6), 481–486.

Creswell, J. W. (2014). *Research design: qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.

Fitriani, R. (2020). Application of the Problem-Based Learning model in increasing student responsibility in science learning in elementary schools. *Journal of Elementary Education* , *11*(2), 130–137.

Hmelo-Silver, C.E. (2004). Problem-based learning: What and how do students learn? *Educational Psychology Review* , *16*(3), 235–266.

Johnson, D. W., & Johnson, R. T. (1994). *Learning together and alone: Cooperative, competitive, and individualistic learning* (4th ed.). Allyn & Bacon.

Ministry of Education and Culture. (2016). *Guidelines for character education in elementary schools*. Jakarta: Ministry of Education and Culture of the Republic of Indonesia.

Lickona, T. (1991). *Educating for character: How our schools can teach respect and responsibility*. Bantam Books.

Miles, M. B., & Huberman, A. M. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). SAGE Publications.

Moleong, L.J. (2019). *Qualitative research methodology* (Revised edition). Rosdakarya Youth.

Sagala, S. (2013). *Concept and meaning of learning*. Alphabet.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes.* Harvard University Press.

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE Publications.

.