



Project-Based Learning as a Means of Cultivating Responsible Characters in Elementary Schools

Muhammad Bahrul Alam¹, Muhroji¹

¹Universitas Muhammadiyah Surakarta, Indonesia

*Corresponding Author: Muhammad Bahrul Alam

E-mail: a510210181@student.ums.ac.id



Article Info

Article history:

Received 4 May 2025

Received in revised form 2

June 2025

Accepted 27 June 2025

Keywords:

Project Based Learning

Responsibility

Student Character Elementary

School

Abstract

This study aims to describe teachers' efforts in instilling a character of responsibility through project-based learning, as well as identifying supporting factors and challenges faced. The researcher used a descriptive qualitative method with data collection techniques in the form of observation, interviews, and documentation. The data used are divided into 2, namely primary data and secondary data. Data validity testing was carried out using data triangulation consisting of technique triangulation and source triangulation. Data analysis used is divided into three flows, namely data reduction, data presentation and drawing conclusions. The results of the study showed that teachers instilled a character of responsibility through a strategy of dividing tasks, monitoring the process, evaluating individuals, and giving appreciation. Project-based learning is considered effective in forming students' character of responsibility. The main challenges include differences in student motivation and lack of family support, while supporting factors come from the teacher's personal approach, a supportive school environment, and parental involvement. With the right strategy, project-based learning becomes an effective means of instilling a character of responsibility in elementary school students.

Introduction

The character of responsibility is a very important provision for a person's life. A person who has a responsible character will encourage himself to become a person who is aware of what is his responsibility, shows orderly behavior and obeys the rules. The development of a responsible character can be done from elementary school so that the character of responsibility becomes a habit that has been carried out since early on. Elementary school is the right time to start instilling a responsible character (Ayurachmawati, 2018; Zulela et al., 2022; Birhan et al., 2021; Adika & Dafit, 2023).

One of the parties that has an important role in instilling a character of responsibility in children is parents. Parents, who are the first place for children to learn something, should teach and provide examples of the character of responsibility so that children can learn or even imitate it (Andini et al., 2024; Huda et al., 2022). In addition to parents, teachers also have a very important role in instilling a sense of responsibility in children. Teachers are guides, motivators, trainers, models and assessors. Efforts to instill a sense of responsibility in students have certainly been attempted through various learning models and learning methods. One of the learning models attempted in instilling character values in children is project-based learning (Millah, 2019; Vatamaniuk & Dutkevych, 2024).

Project-based learning (PBL) is an active learning that is centered on students. Project-based learning focuses on students' abilities that they gain from exploring knowledge through the

experiences they gain through their curiosity to find solutions and present solutions in the form of projects (Fitriantingtyas et al., 2023; Smith et al., 2022).

Project-based learning focuses on the core concepts and principles of a discipline, involving students in solving problems and meaningful activities in producing real work products, project-based learning requires several stages in a certain time span, not just about collaboration between teachers and students. Project learning focuses on product development or performance (Hussein, 2021; Martinez, 2022; Juuti et al., 2021). In general, students carry out activities to organize activities in groups, examine problems, solve problems, and provide conclusions on the results (Aini et al., 2024; Shu & Gu, 2023).

In addition to obtaining learning materials in class, students also have the opportunity to be directly involved in projects related to the material being studied. This Project Based Learning model can increase student creativity and involvement, considering that projects designed by teachers include tasks to investigate, combine theories, discuss, and create solutions to problems, both individually and in groups (Marsen & Neviyarni, 2021). According to Ningsih (2011) The final result of this process is the presentation of a report that functions as a description of students in solving problems, both in written and oral form. The steps in the Project Based Learning learning model are as follows: (1) asking questions as triggers to arouse students' curiosity; (2) providing opportunities for students to identify problems and formulate basic assumptions (hypotheses) as part of project planning; (3) setting a schedule for project implementation; (4) monitoring student progress during the project; (5) testing project results as evidence of the hypothesis that has been proposed; and (6) evaluating the results of the project.

Previous research that discussed the instillation of a responsible character was conducted by (Andini et al., 2024) entitled The Influence of Project Based Learning Model on Responsibility and Cooperation Attitude of Grade II Elementary School Students. This study shows that the implementation of Project Based Learning (PJBL) has a positive influence on the responsibility and cooperation attitudes of grade 2C students at SDIT Alam Nurul Islam. By using a one-group pretest-posttest design, the results of the study revealed a significant increase in both variables. The average student responsibility score increased by 4.68 points, while the cooperation score increased by 6.68 points after the implementation of PJBL. These findings prove that PJBL is able to help students become more disciplined, cooperative, and responsible in completing their assignments. Therefore, this learning model is highly recommended to be implemented by teachers in building student character in elementary schools through a more active and contextual project-based approach.

Research conducted by Ayurachmawati (2018) entitled Instilling Character Values Through Project-Based Natural Science Learning in Elementary Schools. This study has the result that character values can be formed and instilled through integration in all subjects. In science learning, the focus is not only on the concepts taught, but also on the process of mastering the concepts by students. The goal is to make learning more meaningful. In this process, students are expected not only to understand various concepts, but also to absorb character values that will be their provisions in the future. Character values reflect good attitudes and morals that can be developed through character education. One of the science learning activities that supports the integration of character education is project-based learning. Because in the learning steps, this approach can facilitate the formation of character values.

From The results of previous studies show that instilling a character of responsibility can be done with various methods, one of which is using project-based education. The focus of this study is that project-based education can instill a character of responsibility and the role of

teachers in implementing project-based learning to instill a character of responsibility in elementary school students (Pentianasari et al., 2022; Utari & Afendi, 2022; Yurianto & Maghfurin, 2024; Prasetyo et al., 2023).

The decline in awareness of the character of responsibility can be caused by a lack of guidance about responsibility and awareness from students and parents about the importance of the character of responsibility (Musa'ad et al., 2024). This study will discuss the instillation of the character of responsibility through project-based learning to overcome the decline in the character of responsibility of elementary school students. This study contains questions answered by grade 4 teachers regarding the implementation of project-based learning as a medium for instilling the character of responsibility (Rachmadtullah et al., 2020). Thus, it is expected to contribute to improving the quality of education in Indonesia. Based on the background explained above, the researcher is interested in conducting a study entitled "Project-Based Learning as a Means of Cultivating Responsible Character in Elementary Schools". The study will be conducted at SD Negeri Pacitan.

Methods

Researchers use qualitative methods with a descriptive approach. Descriptive qualitative research is a research method that aims to describe, explain and validate the activities being studied. Descriptive research is expected to provide an overview of how effective an activity is (Agustia et al., 2024). The location of this research is in SD Negeri Pacitan with the object of research on teacher strategies in instilling the character values of responsibility through project-based learning. While the subjects of the research were students and teachers of grade 4. The data is divided into two, namely primary data and secondary data. Primary data is data obtained by collecting the results of interviews with teachers and the results of observations in grade 4. In this study, primary data can be in the form of observation data or interview results. The primary data source in this study came from the results of interviews with grade 4 teachers. In addition, observations for Pancasila Education learning were carried out with grade 4 students, in order to determine the role of teachers in instilling the character values of responsibility through project-based learning (PJBL). Secondary data is data that has been collected by researchers. In this study, secondary data sources were obtained through documents regarding the background and conditions of the school, teaching modules, photos, and recordings.

Data validity testing is done using data triangulation. Data triangulation means, to obtain information from different sources with the same technique. The data triangulation used is in the form of technique triangulation and source triangulation. Data collection uses interview, observation and documentation techniques at SD Negeri Pacitan.

The data analysis technique used consists of three streams of activities that occur simultaneously, namely: data reduction, namely the simplification and transformation of field data, data presentation, namely a collection of information that has been arranged to make it easier for readers to understand, drawing conclusions/verification.

Results and Discussion

Research Results, that the implementation of project-based learning in SD Negeri Pacitan is carried out situationally and flexibly, depending on the subject matter and characteristics of grade 4 students. Teachers carry out project-based learning several times a month, especially on materials that require active student involvement, such as PPKn, Bahasa Indonesia, and mathematics. The frequency of use of this method is adjusted to learning needs in order to optimize student learning outcomes, while considering the readiness and condition of the class.

In the project-based learning process to instill the character of responsibility, before the learning begins the teacher provides motivation to students and explains how important it is to practice character values, one of which is the character of responsibility, and provides direction to students to apply these character values. Project-based learning can develop various character values, with the main focus on the character of responsibility. In addition, other character values that are also developed include cooperation, honesty, discipline, independence, creativity, and self-confidence.

During the learning process, the teacher divides students into several groups to be given assignments/projects. Each group member is given specific tasks, such as group leader, group secretary, and group members. With this clear division of roles, students learn that the success of the project depends on the active contribution of each individual, so they are motivated to fulfill their responsibilities well.

The strategies implemented by teachers in instilling the character of responsibility through project-based learning are quite diverse. Teachers begin by explaining the importance of responsibility for the success of the group, supervising the work process periodically, and encouraging self-evaluation and group reflection at the end of the project. They also reward students who show high commitment to the tasks being worked on. Evaluation of student activity is carried out through direct observation, project progress reports, and group reflection results that identify the contribution of each member.

Teachers consider project-based learning quite effective in instilling the value of responsibility. Students' involvement in real tasks makes them more aware of the importance of their respective roles and obligations. Projects related to everyday life, such as creating creative works from used materials or conducting simple research, further strengthen students' awareness of the consequences of their actions. Students become more disciplined, more concerned about the results of cooperation, and more initiative in completing tasks without needing to be reminded.

However, in its implementation, instilling a sense of responsibility through project-based learning does not always run smoothly. There are a number of obstacles faced by teachers during the learning process. One of the main obstacles is the differences in student character in the class. Each student has a different personality, learning style, and ability. These differences affect how they carry out tasks and responsibilities in groups. Some students show high enthusiasm, but others still show a passive attitude and lack of initiative in completing project tasks.

The level of student motivation is also a significant inhibiting factor. Not all students have high learning motivation, especially when facing project assignments that require a long process and collaboration. Students who are less motivated tend to be reluctant to participate actively and often hand over responsibility to other group members. This attitude of depending on group mates is a challenge in forming a character of responsibility, because students are not used to completing their part of the assignment independently and consistently.

In addition, the student's family background also influences the success of instilling a responsible character. Parental support in the learning process at home is very necessary, especially in terms of supervision and providing motivation to children. Unfortunately, not all parents can provide optimal support. Some students come from families who pay less attention to their children's learning process at home, so they do not get continuous character reinforcement outside the school environment.

Teachers also face challenges in monitoring the overall implementation of the project. Because students work in groups, teachers often have difficulty assessing individual contributions fairly

and accurately. It is possible that active students carry more burdens than other group members. This inequality in the distribution of tasks can make students feel unfair and reduce their enthusiasm for responsibility in the future (Majid et al., 2024).

On the other hand, there are several supporting factors that facilitate the instillation of this character of responsibility. The personal approach taken by teachers towards students, intensive communication with parents, and habits in the school environment that instill the values of discipline and hard work are factors that support the success of the implementation of the project in the classroom. Support from fellow teachers in sharing learning strategies also helps strengthen the success of the implementation of this method.

In facing these challenges, teachers implemented a number of concrete solutions. One of them was to divide students into heterogeneous groups, so that more active students could provide assistance to their less active friends. In addition, teachers also carried out strict monitoring during the project and provided special guidance for students who had difficulty in carrying out their responsibilities. To strengthen support, teachers held meetings with parents to raise mutual awareness of the importance of family involvement in supporting the projects their children were working on.

Project-based learning in SD Negeri Pacitan, especially for 4th grade students, shows significant effectiveness in instilling a sense of responsibility. Based on the results of interviews with class teachers, this method is not applied every day, but at certain moments that are considered relevant to learning objectives. Choosing the right time and topic is key so that the project being run can really encourage active student participation. In practice, teachers design projects that require students to be directly involved from planning to reporting results.

Flexibility in the implementation of project-based learning is a major advantage. Teachers can adjust this method to the conditions of students, time availability, and the context of the material. This allows for a learning process that is not rigid, but rather more adaptive and contextual. The implementation that does not force the use of projects in every learning actually makes students more enthusiastic when the project is carried out. They feel that the activity is different from the usual routine, so they are more motivated to complete the task seriously.

The character of responsibility is the main focus in the implementation of the project, but its impact extends to the development of other characters. Teachers observed that the projects carried out also helped to foster the values of cooperation, honesty, discipline, creativity, and independence in students. In each group, students are given different roles and are required to complete their respective parts of the task. With this system, each child learns that the success of the group depends on the contribution of the individual.

The strategies implemented by teachers to instill the character of responsibility vary widely. One effective strategy is a clear and fair division of roles within the group. Teachers also conduct active monitoring during the project process, both directly and through progress reports. In addition, evaluations are carried out not only on the final results of the project, but also on the process and individual activity. This aims to ensure that students truly realize the importance of playing an active role and being responsible for the tasks they are given.

In carrying out the project, students gain very meaningful hands-on experience. They learn to manage time, complete tasks independently, face challenges, and find solutions together. When a member is negligent or irresponsible, the impact is immediately felt on the final result of the group. This experience forms an awareness that every action has consequences, and responsibility is an important part of shared success.

The effectiveness of project-based learning in forming a character of responsibility can also be seen from changes in students' attitudes. The teacher said that students who were active in the project showed higher discipline, a sense of ownership of the task, and an awareness of completing work on time. These attitudes were not only seen in the project, but also began to be carried over to other learning activities. This is in line with the constructivist theory which states that active involvement in learning encourages the internalization of positive values and attitudes.

However, the implementation of this method is not without challenges. Internal factors such as differences in motivation levels, interests, and abilities of students are obstacles that often arise. Some students still show a passive attitude, depend on friends, or do not understand the importance of their role in the group. This hinders the process of forming a character of responsibility evenly among all students.

In addition to internal factors, external factors are also a serious challenge. The family backgrounds of students are very diverse. Not all parents provide support and attention to their children's learning activities at home. Lack of supervision, motivation, and learning facilities at home make it difficult for some students to complete project assignments properly. This increases the burden on teachers in ensuring that all students get a fair chance to develop.

To overcome these challenges, teachers make various strategic efforts. Among them are conducting strict monitoring, individual approaches to less active students, and continuous coaching towards a sense of responsibility. Teachers also increase communication with parents, both directly and through digital communication media, to build shared awareness in supporting the formation of student character. Close cooperation between schools and families is key to creating a conducive learning environment.

Through these steps, project-based learning not only functions as a method to achieve curriculum targets, but also as an effective means of forming students' responsible character from an early age. Planned implementation, accompanied by fair supervision and evaluation, allows students to experience directly the meaningful learning process. Thus, character values are not only taught theoretically, but are truly instilled through real experiences in their daily learning lives.

Conclusion

From the results of this study, it can be concluded that project-based learning in grade 4 of SD Negeri Pacitan is a very effective method in instilling a sense of responsibility in students. Its flexible application and adaptability to the material needs and characteristics of students provide maximum opportunities for the development of character values. Learning strategies that emphasize active student involvement, clear division of roles, and evaluation based on individual participation greatly contribute to the formation of a sense of responsibility. Despite challenges, such as differences in student backgrounds and lack of family support, teachers have successfully overcome these problems with a creative and communicative approach. Thus, project-based learning is not only able to improve students' academic competence, but also shape their character into responsible, independent individuals who are ready to face challenges in the future.

References

Adika, R., & Dafit, F. (2023). The Teacher's Role in Forming Student Discipline Character in Elementary Schools. *Scaffolding: Jurnal Pendidikan Islam Dan Multikulturalisme*, 5(1), 647-660. <https://doi.org/10.37680/scaffolding.v5i1.2542>

- Agustia, D. E., Yuliani, A. P., Fitriani, S. A., & Suprianto, O. (2024). Analisis Pendidikan Karakter Berkebhinekaan Global Melalui Pembelajaran Ppkn Terhadap Nilai Moral Siswa Sekolah Dasar. *Jurnal Pendidikan Dasar Flobamorata*, 5(1), 129-138. <https://doi.org/10.51494/jpdf.v5i1.1314>
- Aini, F., Ramadan, Z. H., & Universitas Islam Riau. (2024). Peran guru dalam mengembangkan nilai etika dan moral peserta didik sekolah dasar. *ELSE (Elementary School Education)*, 8(2), 331–339.
- Andini, P., Sukmarani, D., Wijayanto, S., & Winarto, W. H. (2024). Pengaruh model project based learning terhadap sikap tanggung jawab dan kerja sama siswa kelas II sekolah dasar. [*Nama Jurnal jika tersedia*], 8, 1–12.
- Ayurachmawati, P. (2018). Penanaman nilai-nilai karakter melalui pembelajaran ilmu pengetahuan alam berbasis proyek di sekolah dasar. *Prosiding Seminar Nasional Pendidikan*, 12–26.
- Birhan, W., Shiferaw, G., Amsalu, A., Tamiru, M., & Tiruye, H. (2021). Exploring the context of teaching character education to children in preprimary and primary schools. *Social Sciences & Humanities Open*, 4(1), 100171. <http://dx.doi.org/10.1016/j.ssaho.2021.100171>
- Fitrianingtyas, A., Rasmani, U. E. E., Wahyuningsih, S., Jumi atmoko, J., Zuhro, N. S., Winarji, B., & Nurjanah, N. E. (2023). Mengembangkan pendidikan karakter melalui pembelajaran berbasis proyek di PAUD. *Jurnal Obsesi: Jurnal Pendidikan Anak Usia Dini*, 7(5), 5675–5686. <https://doi.org/10.31004/obsesi.v7i5.4970>
- Huda, S., Ridwanulloh, M. U., Khasanah, S. M., Prasetyo, A. E., & Donasari, R. (2022). Improving Language Skills and Instilling Character Values in Children Through Storytelling. *Al-Tadzkiyyah: Jurnal Pendidikan Islam*, 13(2), 161-184. <https://doi.org/10.24042/atjpi.v13i2.13880>
- Hussein, B. (2021). Addressing collaboration challenges in project-based learning: The student's perspective. *Education Sciences*, 11(8), 434. <https://doi.org/10.3390/educsci11080434>
- Juuti, K., Lavonen, J., Salonen, V., Salmela-Aro, K., Schneider, B., & Krajcik, J. (2021). A teacher–researcher partnership for professional learning: Co-designing project-based learning units to increase student engagement in science classes. *Journal of Science Teacher Education*, 32(6), 625-641. <https://doi.org/10.1080/1046560X.2021.1872207>
- Majid, L. A., Muzaini, M. C., & Salamah, I. (2024). Model pembelajaran berbasis proyek dengan perancangan pendidikan karakter pada mata pelajaran SBDP di sekolah dasar. *Jurnal Ilmiah Pendidikan Dasar*, 9(1), 1187–1199.
- Marsen, C., & Neviyarni, S. (2021). Peran orang tua dan guru dalam mengembangkan moral peserta didik sekolah dasar di era revolusi industri 4.0. *JPGI (Jurnal Penelitian Guru Indonesia)*, 6(1), 49-52.
- Martinez, C. (2022). Developing 21st century teaching skills: A case study of teaching and learning through project-based curriculum. *Cogent Education*, 9(1), 2024936. <https://doi.org/10.1080/2331186X.2021.2024936>

- Millah, F. (2019). Penerapan model project based learning untuk meningkatkan sikap tanggung jawab dan hasil belajar siswa. *Jurnal Pendidikan Guru Sekolah Dasar*, 8(21), 2034–2044.
- Musa'ad, F., Ahmad, R. E., Sundari, S., & Hidayani, H. (2024). Pembelajaran berbasis proyek untuk meningkatkan kemampuan berpikir kritis siswa. *Jurnal Cendekia: Jurnal Pendidikan Matematika*, 8(2), 1481–1487. <https://doi.org/10.31004/cendekia.v8i2.3361>
- Ningsih, T. (2011). Implementasi Pendidikan Karakter dalam Perspektif di Sekolah. *INSANIA: Jurnal Pemikiran Alternatif Kependidikan*, 16(2), 235-254.
- Pentianasari, S., Amalia, F. D., Martati, B., & Fithri, N. A. (2022). Penguatan pendidikan karakter pada siswa sekolah dasar melalui pemanfaatan literasi digital. *Jurnal PGSD*, 8(1), 58–72. <https://doi.org/10.32534/jps.v8i1.2958>
- Prasetyo, W. H., Sumardjoko, B., Muhibbin, A., Naidu, N. B. M., & Muthali'in, A. (2023). Promoting digital citizenship among student-teachers: The role of project-based learning in improving appropriate online behaviors. *Participatory Educational Research*, 10(1), 389-407. <http://dx.doi.org/10.17275/per.23.21.10.1>
- Rachmadtullah, R., Syofyan, H., & Rasmitadila. (2020). The role of civic education teachers in implementing multicultural education in elementary school students. *Universal Journal of Educational Research*, 8(2), 540–546. <https://doi.org/10.13189/ujer.2020.080225>
- Shu, X., & Gu, X. (2023). An empirical study of A smart education model enabled by the edumetaverse to enhance better learning outcomes for students. *Systems*, 11(2), 75. <https://doi.org/10.3390/systems11020075>
- Smith, K., Maynard, N., Berry, A., Stephenson, T., Spiteri, T., Corrigan, D., ... & Smith, T. (2022). Principles of problem-based learning (PBL) in STEM education: Using expert wisdom and research to frame educational practice. *Education Sciences*, 12(10), 728. <http://dx.doi.org/10.3390/educsci12100728>
- Utari, D., & Afendi, A. R. (2022). Implementation of Pancasila student profile in elementary school education with project-based learning approach. *EduLine: Journal of Education and Learning Innovation*, 2(4), 456-464. <https://doi.org/10.35877/454RI.eduline1280>
- Vatamaniuk, G., & Dutkevych, T. (2024). Project-based learning as a means of forming leadership qualities in senior preschool children. *Scientific Bulletin of Mukachevo State University. Series "Pedagogy and Psychology*, 10(3), 29-39. <http://dx.doi.org/10.52534/msu-pp3.2024.29>
- Yurianto, R., & Maghfurin, A. (2024). Exploring the Role of Project-based Learning in Installing Character Values in Arabic Language Learners. *European Journal of Humanities and Educational Advancements*, 5(1), 64-69.
- Zulela, M. S., Neolaka, A., Iasha, V., & Setiawan, B. (2022). How is the education character implemented? The case study in Indonesian elementary school. *Journal of Educational and Social Research*, 12(1), 371. <https://doi.org/10.36941/jesr-2022-0029>