Project Based Assessment with a Phenomenon-Based Learning Approach on Achieving the Pancasila Student Profile in Elementary School

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A R T I C L E   I N F O

A B S T R A K

Profil pelajar Pancasila merupakan salah satu gambaran kompetensi yang wajib dimiliki oleh peserta didik Indonesia. Penelitian ini bertujuan untuk menganalisis dampak project-based assessment dengan pendekatan phenomenon-based learning terhadap ketercapaian profil pelajar Pancasila pada siswa sekolah dasar. Penelitian ini merupakan penelitian eksperimen dengan menggunakan pendekatan kuantitatif. Desain penelitian yang digunakan pada penelitian ini adalah nonequivalent post-test only control group design. Populasi dalam penelitian ini adalah siswa sekolah dasar yang tersebar dalam berbagai wilayah, yakni pedesaan, pinggiran kota, dan daerah perkotaan. Penentuan jumlah sampel dalam penelitian ini dilakukan dengan menggunakan rumus slovin dengan batas toleransi kesalahan sebesar 3%. Selanjutnya, penarikan sampel dalam penelitian ini dilakukan dengan menggunakan teknik cluster random sampling. Berdasarkan hasil analisis Independent Sample t-test dengan menggunakan bantuan program IBM SPSS Statistics 21.0 for Windows, diperoleh nilai signifikansi (Sig. 2-tailed) sebesar 0,000. Berdasarkan hasil tersebut, dapat dapat dilihat bahwa nilai Sig. < 0,05. Sehingga dapat disimpulkan bahwa H_0 ditolak dan H_a diterima. Dengan kata lain, terdapat perbedaan yang signifikan ketercapaian profil pelajar Pancasila pada kelompok yang diberikan perlakuan berupa project-based assessment dengan pendekatan phenomenon-based learning dengan yang tidak diberi perlakuan berupa project-based assessment dengan pendekatan phenomenon-based learning. Sehingga, penggunaan project-based assessment dengan pendekatan phenomenon-based learning efektif dalam meningkatkan ketercapaian indikator Profil Pelajar Pancasila peserta didik.

A B S T R A C T

The Pancasila student profile is a description of the competencies that Indonesian students must have. This study aims to analyze the impact of project-based assessment with a phenomenon-based learning approach on achieving the Pancasila student profile in elementary school students. This research is experimental research using a quantitative approach. The research design used in this study was a nonequivalent post-test only control group design. The populations in this study were elementary school students spread across various regions, namely rural, suburban and urban areas. Determining the number of samples in this study was carried out using the Slovin formula with an error tolerance limit of 3%. Furthermore, sampling in this research was carried out using cluster random sampling techniques. Based on the results of the Independent Sample t-test analysis using the IBM SPSS Statistics 21.0 for Windows program, a significance value (Sig. 2-tailed) was obtained of 0.000. Based on these results, it can be seen that the Sig. < 0.05. So, it can be concluded that H_0 is rejected and H_a is accepted. In other words, there is a significant difference in the achievement of the Pancasila student profile in the group that was given treatment in the form of a project-based assessment with a phenomenon-based learning approach and those who were not treated in the form of a project-based assessment with a phenomenon-based learning approach. Thus, the use of project-based assessment with a phenomenon-based learning approach is effective in increasing students' achievement of the Pancasila Student Profile indicators.

1. INTRODUCTION

Indonesia is a country that has a pluralistic society. This is demonstrated by the existence of various ethnic groups, cultures, religions, races and languages. This pluralism is one of the potential assets for achieving integration and federalism with moral values born from national values. On the one hand, pluralism will make Indonesia rich in culture and diversity. However, on the other hand, pluralism also has the potential to give rise to various social stratifications and fragmentation. Therefore, pluralism needs to be encouraged to integrate various areas of community life as part of future strategies. Various

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efforts have been made by many parties to overcome the negative impacts of the progress and diversity of Indonesian society (Harahap, 2013; Sari, 2021). From an educational perspective, efforts have been made to instill character regarding Pancasila values at the school level to understand the values of tolerance towards national diversity (Murdiono et al., 2017; Sa'diyah & Dewi, 2022). At the higher education level, understanding the values of pluralism and diversity has also been carried out to ward off issues of discrimination and social violence (Maulani, 2012; Prasetiawati, 2017). Apart from that, the government has also started from an early age to instill the value of diversity at the elementary school level. In fact, various community organizations are also making efforts to instill maturity in diversity. However, the problem of social conflict due to pluralism and diversity still exists.

In fact, conflict can occur in line with the many conflicts over different views. For this reason, an attitude of mutual tolerance is needed in handling conflicts in the name of differences (Ginting & Aryaningrum, 2009; Muhammad & Widyanto, 2019). In terms of social problems, strands of values that encourage national integration began to emerge due to a lack of social skills, while teenagers at that time had low social skills. In this case, maintaining peace can be done by exploring the values of diversity that exist in various contexts, as a solution as well as a dampening effect on society's negative behavior regarding pluralism (Cornelisse & Duane, 2013; Pamungkas & Sudigdo, 2022). At the policy level, the government has issued various learning guides on instilling diversity values. This can be seen from various guides and manuals, one of which is about the Pancasila Student Profile. It cannot be separated that Pancasila is the basis of a legal source that upholds regulations based on national law. Students in forming the Pancasila Student Profile do not ignore the character education that has long been inherent in students (Rai et al., 2022; Safitri et al., 2022).

Minister of Education and Culture (Kemendikbud) Regulation Number 22 of 2020 explains the Pancasila Student Profile which is defined as the embodiment of students in Indonesia as lifelong learners. The aim of the Pancasila Student Profile is to be able to compete in global competition and implement behavior in accordance with the teachings contained in Pancasila. The profile of Pancasila students in education in Indonesia is divided into six dimensions as follows: (1) faith and devotion to God Almighty and having noble morals; (2) independent; (3) cooperate; (4) global diversity; (5) critical reasoning; and (6) creative. The Pancasila Student Profile can be used as a guide for all stakeholders, especially teachers and students, in carrying out the learning process (Kurniawaty & Faiz, 2022; Susilawati et al., 2021).

Based on these descriptions, the Pancasila student profile is a description of the competencies that Indonesian students must have (Kahfi, 2022; Mery et al., 2022). Therefore, to realize the achievement of the Pancasila Student Profile, various efforts need to be made. One effort that can be made is by using project-based assessment with a phenomenon-based learning approach. Project-Based Assessment with a Phenomenon-Based Learning Approach is an approach in education that combines project-based learning with a focus on phenomena (Samerkhanova & Imzharova, 2018; Uhl et al., 2021). In this method, students work on projects that are relevant to the particular phenomenon or topic they are studying. The goal is to understand and explain this phenomenon in a more in-depth way. During the learning process, students work in groups or individually to plan, implement, and evaluate their projects. This approach not only allows students to develop a solid understanding of the phenomenon, but also enhances their collaboration, problem-solving, and critical thinking skills (Aini et al., 2018; Mubarak & Yahdi, 2020). The final results of this project often become assessment material that measures student understanding and skills. Thus, Project-Based Assessment with a Phenomenon-Based Learning Approach is a learning method that focuses on understanding concepts through projects related to real-world phenomena.

Several previous studies have shown that the use of a phenomenon-based learning approach has a positive impact on learning (Maisarmah, 2020). The first study stated that there was a significant difference between critical thinking skills and physics learning outcomes of students who were taught using a phenomenon-based learning model and students who were taught using conventional learning models (Pareken et al., 2015; Setyowati & Subali, 2011). The second research stated that there were differences in students' critical thinking before and after implementing this learning model (Khanasta et al., 2016). Other research states that PBL learning increases student scores by more than 10% which makes the use of this method significantly effective (Wakil et al., 2019). Further research states that the use of the PBL model can improve student learning outcomes (Putri et al., 2018).

Based on this explanation, the profile of Pancasila students is one illustration of the competencies that Indonesian students must have. This Pancasila student profile can be achieved with an appropriate approach and assessment. Currently, the curriculum in elementary schools may not focus enough on Pancasila values, so there is a need for effective methods to help students understand and apply these values in everyday life. Therefore, this research tries to bridge this gap by combining two approaches, namely project and phenomenon-based learning. The researchers are interested in conducting research

which aims to analyze the impact of project-based assessment with a phenomenon-based learning approach on achieving the Pancasila student profile in elementary school students.

2. METHOD

This research is experimental research using a quantitative approach (Nurmalasari & Erdiantoro, 2020; Virgiawan, 2016; Zellatifanny & Mudjiyanto, 2018). The research design used in this study was a nonequivalent post-test only control group design. Based on this design, the research experimental group will be given learning treatment using project-based assessment using a phenomenon-based learning approach and the control group will be given learning without implementing project-based assessment using a phenomenon approach. After following the learning process, the control group and experimental research group were given a post-test. This research was carried out in Buleleng Regency, Bali Province. The population in this study was elementary school students. Determining the number of samples in this study was carried out using the Slovin formula with an error tolerance limit of 3%. This is because the research population is quite large and diverse. Furthermore, sampling in this research was carried out using cluster random sampling techniques. Cluster Random Sampling is a random sample selection procedure by selecting a subpopulation called a cluster, then each element in the group is selected as a member of the sample (Sukmadinata, 2015). The effectiveness of implementing project-based learning assessment using a phenomenon-based learning approach is measured using the questionnaire method. This method is carried out by giving a post-test to determine the perception of students' achievement of the dimensions of the Pancasila student profile. The instruments used went through the validity and reliability testing stages. Testing the validity of the content of the questionnaire instrument used the CVR formula and reliability was tested using the Alpha-Cronbach formula. The grid of instruments used in this research is presented in Table 1.

Table 1. Instrument Grid

Dimension	Element	Number of Items
Have faith, be devoted to God Almighty, and have noble character	Religious morals	2
	Personal morals	2
	Morals towards humans	2
	Morals towards nature	2
	State morals	2
Global Diversity	Get to know and appreciate culture	2
	Intercultural communication skills in interacting with others	2
	Reflection and responsibility for the experience of diversity	2
Worked together	Collaboration	2
	Concern	2
	Share	2
Creative	Generate original ideas	2
	Produce original works and actions	2
Critical Reasoning	Obtain and process information and ideas	2
	Analyze and evaluate reasoning	2
	Reflecting on thoughts and thought processes	2
Independent	Make decisions	2
	Awareness	2
	Self-regulation	2
Total		**38**

The data analysis method used in this research is descriptive and inferential analysis. The analysis technique used to test the hypothesis is the uncorrelated sample t-test (Independent Sample T-Test). Hypothesis testing uses the help of the IBM SPSS Statistics for Windows version 21.0 program. Testing is determined by the significance value. This value then determines the decisions taken in the research. Hypothesis testing is preceded by analysis prerequisite tests which include data distribution normality tests and variance homogeneity tests.

3. RESULT AND DISCUSSION

Result

Descriptive Analysis Results

Descriptive analysis is a statistical method used to describe and summarize data. The main goal of descriptive analysis is to provide a clear picture of the data, so that people can understand the basic characteristics of the data without making deeper conclusions or generalizations. The results of descriptive analysis of posttest data in this study are presented in Table 2.

Table 2. Descriptive Analysis Results

Statistics	Control	Experiment
Mean	59.93	76.96
Median	60	77
Varians	110.48	95.76
Std. Deviation	10.51	9.78
Minimum	40	57
Maximum	80	97

Base on Table 2 the average in the experimental group was 76.96, while in the control group it was 59.93. This shows that the experimental group had a higher mean than the control group in the measured parameters. The variance in the experimental group had a variance of around 95.76, which was lower compared to the control group which had a variance of around 110.48. This shows that the data in the experimental group tends to be more homogeneous than the control group. Then the standard deviation is the square root of the variance and measures the distribution of data within groups. The standard deviation in the experimental group was around 9.78, while in the control group it was around 10.51. This shows that the data in the experimental group has lower scatter than the control group.

Analysis Prerequisite Test Results

The prerequisite tests carried out in this research include the normality test of data distribution and the homogeneity of variance test. Based on the results of the normality test analysis using the IBM SPSS Statistics 21.0 for Windows program, the significance value (Kolmogorov-Smirnov) of the pretest data was 0.200 and the posttest data was 0.200. The result is show in Table 3.

Table 3. Prerequisite Test Results

Prerequisite Test	Significance (Sig.)	Result
Normality test	0.200	Sig. > 0.05, Normal Data
Normality test	0.200	Sig. > 0.05, Normal Data
Homogeneity of Variance Test	0.096	Sig. > 0.05, Homogeneous Variants

Based on these results as show in Table 3, it can be seen that the Sig. > 0.05 for all data groups. So it can be concluded that the two groups of data are normally distributed. The results of the data variance homogeneity test in this study using the IBM SPSS Statistics 21.0 for Windows program, show that the significance value (Based on Mean) is 0.096. Based on these results, it can be seen that the Sig. > 0.05. So it can be concluded that the variance of the data is homogeneous. All analytical requirements related to Independent Sample t-test analysis have been fulfilled, so that Independent Sample t-test analysis can be used to test the hypothesis of this research.

Hypothesis Test Results

Based on the results of the Independent Sample t-test analysis/ Correlated Sample t-test using the help of the IBM SPSS Statistics 21.0 for Windows program, a significance value (2-tailed Sig.) was obtained of 0.000. The result is show in Table 4.

Table 4. Hypothesis Test Results

Analysis Results T-Test	
Significance Value	0.000

Analysis Results T-Test	
Sig. (2-tailed)	< 0.05

Based on these results show in Table 4, it can be seen that the Sig. < 0.05. So, it can be concluded that H_0 is rejected and H_a is accepted. In other words, there is a significant difference in the achievement of the profile of Pancasila students in the group that was given treatment in the form of a project-based learning assessment with a phenomenon-based learning approach and those that were not given treatment in the form of a project-based learning assessment. Thus, the use of project-based learning assessments with a phenomenon-based learning approach is effective in increasing the achievement of students' Pancasila Student Profile indicators.

Discussion

This research shows that the use of project-based learning assessment with a phenomenon-based learning approach is effective in increasing students' achievement of Pancasila Student Profile indicators. Phenomenon Based Learning (PhBL) is a form of learning developed in Finland in 2016 (Hidayah et al., 2021). This learning model is targeted to better prepare students to face real life. PhBL is learning where questions and problems are studied based on real world phenomena, information and skills can be used collaboratively between different subjects and classes who experience the same situation (Han & Ellis, 2019; Singh. & Prasad Singh, 2021). The PhBL model is based on subject matter that is connected to events or phenomena that occur or have existed in everyday life. The phenomena in the PhBL model in question are symptoms or events that students encounter in their daily lives, both those that occur in nature and in the use of laboratory equipment (Khanasta et al., 2016; Putri et al., 2018), or events that students encounter in their daily lives, both those that occur in nature and those that occur with technological tools (Khanasta et al., 2016). PhBL is not just a learning method, PhBL is revolutionary, where this model reorganizes learning so that learning occurs in the context of problem solving where students are continuously active in participating in handling information, discussing with peers, practicing negotiation until the conclusion stage. Apart from these descriptions, if we talk about PhBL we will be introduced to learning that provides opportunities for students to learn multiliteracy because students learn about real phenomena in student life or topics that are of special interest to students (Rasi et al., 2019; Symeonidis & Schwarz, 2016). PhBL consists of 5 (five) dimensions, namely holistic, authenticity, contextuality, problem-based inquiry learning and learning process.

In line with the research results that have been mentioned related to PhBL, there are several studies that show that the use of project-based learning assessments has a positive impact on learning. The first study found that project-based learning improved psychomotor skills (Rahmawati & Haryani, 2015). In addition, other research has developed project assessments in science subjects in elementary schools (Widiana, 2016). Furthermore, similar research found that STEM-PjBL had a positive effect on students' problem solving abilities in impulse and momentum material (Purwaningsih et al., 2020).

Project-Based Assessment is the development of assessment that originates from project-based learning. Project-based assessments are carried out on tasks that must be completed within a certain time period. Consequently, project tasks begin with planning, data collection, organizing, processing, and presenting data (Damyanov & Tsankov, 2018; Safaruddin et al., 2020). Project-based assessment includes assignment assessments that contain investigative activities and must be completed within a certain time for students in groups. Project-based assessments require students to solve various problems (Amri & Tharihk, 2018). Apart from that, this assessment can guide students in carrying out inquiry activities to gain new insights and solve problems with the knowledge they build themselves. The use of project-based assessment is suitable for science learning because it increases student self-efficacy, namely students' confidence in carrying out assignments (Lestari et al., 2020; Sukmasari & Rosana, 2017). In project-based assessment, students are actively involved in learning activities, and teachers can observe their activities during the learning process. During the project, the student's psychomotor skills can be optimally assessed. Students can improve their science process skills and scientific attitudes. The projects given to students must include scientific process skills and scientific attitudes.

The implications of this research have the potential to develop student profiles who are able to understand and implement Pancasila values in everyday life, which is the goal of education in Indonesia. Apart from that, the results of this research can support the use of a project-based learning approach as an effective strategy in achieving the Pancasila profile. This research can make a valuable contribution to the field of education and provide guidance for teachers and educational policy makers. However, this research also has limitations, this research requires quite a lot of time and resources. Resource limitations can affect the scope and depth of research. The implications of this research need to be understood in the Indonesian cultural and social context, which may not be applicable to other cultures.

4. CONCLUSION

This study aims to analyze the impact of project-based assessment with a phenomenon-based learning approach on achieving the Pancasila student profile in elementary school students. This study concluded that there is a significant difference in the achievement of the profile of Pancasila students in the group that was given treatment in the form of a project-based learning assessment with a phenomenon-based learning approach and those that were not given treatment in the form of a project-based learning assessment. Thus, the use of project-based learning assessments with a phenomenon-based learning approach is effective in increasing the achievement of students' Pancasila Student Profile indicators.

5. ACKNOWLEDGEMENT

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