

The Influence of the Discovery Learning Model Assisted by Cultural Diversity Room Image Media on the Learning Outcomes of Pancasila and Citizenship Education of Students

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Abstract : In education, the significance of teaching and learning is paramount, with teachers assuming a pivotal role in shaping successful educational outcomes. Learning, viewed as an ongoing lifelong process, is characterized by purposeful endeavors to cultivate individual potential and foster responsible citizenship. Civic education, marked by an emphasis on comprehensive comprehension and skill development, encounters persistent challenges such as the limitations of conventional lecture-based methods that impede effective learning. In response, this study developed a specialized learning module concentrating on two-variable linear equations, employing the ADDIE model. Employing a quantitative experimental research approach, data collection involved comprehensive methods including questionnaires, observations, interviews, and meticulous statistical analysis. The validation process underscored the module's pronounced practicality and engagement, further affirming its viability for implementation. The study's findings, presented earlier, deduced that the integration of the discovery learning model aided by the "bilik" cultural diversity image media significantly influences the learning outcomes of fourth-grade students studying civic education at SD Muhammadiyah 2 Waru. Notably, pretest results averaged at 68.25, while posttest scores displayed an average of 94.7. The t-test calculations confirmed a disparity in the averages, with pretest and posttest increments of 71.17 and 96.7, respectively. These outcomes substantiate the model's efficacy in elevating posttest scores beyond pretest levels, emphasizing its impact on learning outcomes. Consequently, this research offers valuable insights into advancing the effectiveness of civic education through innovative pedagogical strategies.

Keywords : education, teaching, learning, outcomes

INTRODUCTION

In education at schools, teaching and learning activities are essential¹. Teachers are a determining factor in the success of teaching and learning. Learning is a complex process that

¹ James A Banks et al., "Diversity within Unity: Essential Principles for Teaching and Learning in a Multicultural Society," *Phi Delta Kappan* 83, no. 3 (2001): 196–203; Burton R Clark, "The Modern Integration of Research Activities with Teaching and Learning," *The journal of higher education* 68, no. 3 (1997): 241–255.

occurs throughout one's life, from birth to death². According to Suryosubroto, education is a deliberate and planned effort to help develop the potential and abilities of learners for their individual and societal well-being³. Citizenship education is a field of study that examines and analyzes social phenomena and issues in society from various aspects of life or as a synthesis⁴. Therefore, the values contained in citizenship education must be applied effectively to shape the personality of learners, convey knowledge, and develop their skills.

Learning should begin with a contextual question introduction in the context of citizenship education⁵. By addressing contextual issues, learners are gradually guided to master the concepts of citizenship education. The constructivist perspective is the foundation for contextual thinking, making the constructivist paradigm suitable for citizenship education learning.

Efforts to improve the quality of education must encompass all educational components. One aspect that needs enhancement is the teaching and learning process. Due to the broad curriculum coverage, many educators use lecture methods in citizenship education to save time and address the widening gap between taught content and the students' abstract comprehension, causing difficulties in applying acquired knowledge⁶.

Teachers are expected to possess the ability to implement effective teaching models for more efficient learning⁷. The teaching and learning process in elementary schools should facilitate learners in achieving the targeted competencies of the curriculum. The education process standards play a vital role in enhancing education quality. Teachers are also crucial in improving educational quality, ensuring the material delivery aligns with the syllabus guidelines and instructional program design. This necessitates innovative approaches tailored to learner characteristics, enabling them to meet the expected Minimum Mastery Criteria set by the school.

Based on preliminary research conducted on November 15, 2021, a phenomenon involving applying the discovery learning model in a fourth-grade class of 22 learners was identified. This choice was driven by the fact that some learners had yet to reach the Minimum Mastery Criteria,

² Yuli Choirul Ummah and Muh Barid Nizarudin Wajdi, "Dismantling Paradigm Book Ta'limul Muta'allim," *Educatio : Journal of Education* 1, no. 2 (October 30, 2016): 1–10, accessed October 21, 2017, <http://www.ejournal.staimnglawak.ac.id/index.php/educatio/article/view/26>.

³ Buang Suryosubroto, "Proses Belajar Mengajar Di Sekolah: Wawasan Baru, Beberapa Metode Pendukung, Dan Beberapa Komponen Layanan Khusus" (1997).

⁴ Angela Bermudez, "Four Tools for Critical Inquiry in History, Social Studies, and Civic Education," *Revista de estudios sociales*, no. 52 (2015): 102–118; Heela Goren and Miri Yemini, "Global Citizenship Education Redefined—A Systematic Review of Empirical Studies on Global Citizenship Education," *International Journal of Educational Research* 82 (2017): 170–183.

⁵ Walter C Parker, "Knowing and Doing in Democratic Citizenship Education," *Handbook of research in social studies education* (2008): 65–80; Paul R Carr, Gary Pluim, and Lauren Howard, "Linking Global Citizenship Education and Education for Democracy through Social Justice: What Can We Learn from the Perspectives of Teacher-Education Candidates," *Journal of Global Citizenship & Equity Education* 4, no. 1 (2014): 1–21.

⁶ Howard S Adelman and Linda Taylor, "Moving Prevention from the Fringes into the Fabric of School Improvement," in *Implementation of Prevention Programs* (Routledge, 2013), 7–36; Jane Knight, *Internationalization: Elements and Checkpoints*. CBIE Research No. 7. (ERIC, 1994).

⁷ Eric M Hass, Gustavo E Fischman, and Joe Brewer, *Dumb Ideas Won't Create Smart Kids: Straight Talk about Bad School Reform, Good Teaching, and Better Learning* (Teachers College Press, 2014); James H Stronge, *Qualities of Effective Teachers* (Ascd, 2018); Hass, Fischman, and Brewer, *Dumb Ideas Won't Create Smart Kids: Straight Talk about Bad School Reform, Good Teaching, and Better Learning*.

particularly in citizenship education. The data showed that learners' understanding of citizenship education was below the required standard due to their inability to accurately analyze the content's ideas and low interest in reading. These factors resulted in subpar student learning outcomes, aggravated by the need for more facilities to support the learning process, especially learning media. The teaching methods remained teacher-centered⁸.

Using suitable teaching models within the 2017 curriculum, such as discovery learning, aims to engage learners actively in discovering concepts related to the material. In this way, learners analyze and explain what they have learned, presenting their findings independently. Discovery learning is a mental learning process where learners assimilate a concept, categorize it, and explain it. The need for innovations in teaching models presents a solution to enhance learners' reasoning abilities in problem-solving. Thus, direct experiences are crucial for effective learning, requiring learners to be directly involved and responsible for their outcomes.

Therefore, the researcher aims to apply the discovery learning model with the assistance of cultural diversity room images to citizenship education in fourth-grade learners at SD Muhammadiyah 2 Waru. Through this approach, it is anticipated that the influence of discovery learning with diverse cultural room images will positively impact the citizenship education learning outcomes of fourth-grade learners at SD Muhammadiyah 2 Waru.

Using the discovery learning model, learners are expected to influence cognitive learning outcomes in citizenship education for fourth-grade learners at SD Muhammadiyah 2 Waru. Based on this background, the researcher seeks to understand the impact of discovery learning with the assistance of diverse cultural room images on cognitive learning outcomes in citizenship education for fourth-grade learners at SD Muhammadiyah 2 Waru.

METHOD

This study is an experimental quantitative research. Experimental quantitative research begins with data collection, data interpretation, and then uses statistics to present the final results in numerical form, which are analyzed to answer questions and hypotheses, and then works with data and numbers⁹.

The research method in this experiment uses the One Group Pretest-Posttest Design. The collected or obtained data will be processed and analyzed using calculations with the assistance of SPSS Version 26 for easy data calculation. The results of the conducted analysis can lead to a conclusion to answer the research questions posed by the researcher.

⁸ Maryam Sulaeman and Yuli Marlina, "The Use of Multimedia in Teaching Dirasah Islamiyah Course in Higher Education Institution in Indonesia," *Journal of Education and Practice* 8, no. 15 (2017): 207–216.

⁹ R. Burke Johnson and Anthony J. Onwuegbuzie, "Mixed Methods Research: A Research Paradigm Whose Time Has Come," *Educational Researcher* (2004).

Independent Variable

The independent variable is a variable that influences or causes changes or the emergence of the dependent variable. The independent variable in this study is the discovery learning model aided by visual media.

Dependent Variable

The dependent variable is a variable that is influenced or caused due to the presence of the independent variable. In this study, it is the learning outcomes in the cognitive aspect of fourth-grade students in theme 7, subtheme 1, related to ethnic and religious diversity in our country.

Population and Sampling

The population is an area of objects or subjects with certain qualities and characteristics related to a research problem and then drawn to a conclusion. This study's population consists of all fourth-grade students at SD Muhammadiyah 2 Waru. Sampling is a technique of sample selection. Various sampling techniques are utilized to determine the sample used in the study. The sampling technique used in this study is Quota Sampling. Quota sampling is a technique where the researcher determines the quota or number of samples beforehand. The sample used in this study consists of all fourth-grade students at SD Muhammadiyah 2 Waru.

Data Collection Techniques

Data collection techniques are methods used to obtain research data. Data collection is performed using the following methods: 1) Observation, An activity aimed at perceiving and understanding knowledge about a phenomenon based on known knowledge or ideas to obtain necessary information for further research, 2) Documentation, An activity aimed at implementing documentation methods. The researcher investigates written materials such as books, magazines, documents, regulations, meeting minutes, diaries, etc, 3) Test Method, A test is an activity aimed at assessing the success of learners in learning. This involves conducting a pre-test and a post-test. The pre-test is given before the learning process, while the post-test is given after the learning process.

Data Collection Instruments

The survey tool used in this study is a test consisting of citizenship questions. The test comprises a pre-test and a post-test for the control and experimental groups.

The analysis method used to analyze the effect of the discovery learning model aided by cultural diversity room images on the learning outcomes of fourth-grade students in citizenship education is Hypothesis Testing Data. Using the one-sample t-test is a method used to assess the

effectiveness of treatment, indicated by the difference in means before and after the treatment is applied.

RESULT AND DISCUSSION

This study aims to determine the "Effect of Discovery Learning Model Assisted by Cultural Diversity Room Image Media on Learning Outcomes of Civic Education for Grade IV Students at SD Muhammadiyah 2 Waru." Various methods were used in data collection for this research.

Data presentation in this study was obtained through data collection during the teaching of Civic Education for Grade IV students at SD Muhammadiyah 2 Waru, with a total of 20 respondents.

Table 4.1 Descriptive Scores of Pretest-Posttest

Results of Pretest and Posttest Scores

NO.	SUBJECT	SCORE	
		PRE TEST	POST TEST
1.	AMBS	55	89
2.	ADK	58	90
3.	AAA	56	85
4.	GLS	65	97
5.	HIK	68	98
6.	KAVA	68	100
7.	MIU	77	100
8.	MSRP	74	97
9.	RRN	76	95
10.	SNRN	71	95
11.	SAFOAF	69	93
12.	TCP	66	95
13.	HW	77	95
14.	ZWP	70	90
15.	MAGF	69	90
16.	M	74	100
17.	DRP	69	100
18.	MSRPA	68	95
19.	JFM	69	98
20.	NAJ	66	92
	Highest Score	77	100
	Lowest Score	55	85
	Mean	68	94
	Median	69	95

Mode	69	95
Variance	39	18
Std Deviation	6	4

Based on the Pre-Test and Post-Test results, the scores obtained from class IV Siti Walidah show that the highest pre-test score is 77, while the lowest score is 55. Furthermore, the highest post-test score is 100, while the lowest is 85. Thus, it can be concluded that the students' learning outcomes before and after the treatment (treatment) indicate a significant difference in the scores obtained in class IV of SD Muhammadiyah 2 Waru.

The scores that were collected were then subjected to a Normality Test prior to conducting the research. This Normality Test was performed using SPSS version 26. The results of the Normality Test for the Pretest and Posttest scores can be seen in Table 4.2 below:

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PRETEST	,184	20	,074	,908	20	,057
POSTTEST	,178	20	,097	,928	20	,143

a. Lilliefors Significance Correction

Data follows a normal distribution in the Shapiro-Wilk test when the Sig. value is greater than 0.05 (Singgih Santoso, 2014: 191). Based on the table above, the pretest data shows a Shapiro-Wilk Sig. value of 0.057 > 0.05. Similarly, for the posttest data, the Shapiro-Wilk Sig. value is 0.143 > 0.05. This indicates that both the pretest and posttest data follow a normal distribution.

Table 4.3 Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
2,418 ^a	4	8	,134

a. Groups with only one case are ignored in computing the test of homogeneity of variance for POSTTEST.

Based on the table above, it is observed that the significance value (Sig.) for the variable of learning outcomes in Pancasila and Civic Education for fourth-grade students of Siti Walidah is 0.134, which is greater than 0.05. Therefore, it can be concluded that the presented data is homogenous. Since the Sig. value of 0.134 > 0.05, the null hypothesis (H0) is accepted, and parametric analysis can be continued.

Based on the tests of normality and homogeneity of learning outcomes for fourth-grade students of Siti Walidah, it can be determined that the data meets the criteria and is suitable for conducting

a hypothesis test (t-test). This hypothesis test is conducted to address the second research question. The decision-making criteria to determine the results of the hypothesis test using SPSS version 26 are as follows:

If the value of Prob/Significance/P-value $< \alpha$, then H_0 is rejected.

If the value of Prob/Significance/P-value $> \alpha$, then H_a is accepted.

Explanation:

- a) H_0 is rejected: There needs to be more influence of the Discovery Learning model assisted by the cultural diversity room media on the learning outcomes of fourth-grade students at SD Muhammadiyah 2 Waru.
- b) H_a is accepted: The Discovery Learning model is influenced by the cultural diversity room media on the learning outcomes of fourth-grade students at SD Muhammadiyah 2 Waru.

The following is the number of fourth-grade students of Siti Walidah who took the posttest and the results of the hypothesis test analysis using the One-sample t-test, presented in Table 4.4.

Table 4.4 Hypothesis Test for Posttest-Pretest Values Using One-Sample Test

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
PRE_TEST	48,784	19	,000	68,25000	65,3218	71,1782
POST_TEST	98,930	19	,000	94,70000	92,6965	96,7035

In the table above, it can be seen that the Sig. value (2-tailed) is $0.000 < 0.05$ or the calculated t-value $98.930 >$ the t-table value 48.784 . This indicates a positive and significant influence of the discovery learning model on the learning outcomes of students in civic education and nationalism for fourth-grade students at SD Muhammadiyah 2 Waru. Based on the One-Sample T-Test, the obtained Sig. value (2-tailed) is $0.000 < 0.05$, and the calculated t-value $98.930 >$ the t-table value 48.784 . Therefore, it can be concluded with a 95% confidence level that there is a positive and significant influence of the discovery learning model assisted by the cultural diversity image media on students' learning outcomes in civic education and nationalism for fourth-grade students at SD Muhammadiyah 2 Waru.

Discussion

This study aims to determine the influence of the discovery learning model on the learning outcomes of fourth-grade students. The study was conducted for three face-to-face meetings. In

each meeting, the researcher delivered the material and conditioned students according to the steps outlined in the Lesson Plan (RPP), which includes the steps of the discovery learning teaching model. The effectiveness of the discovery learning model is attributed to educators who possess a mastery of the discovery learning teaching model. Furthermore, in education, teachers cannot perform their duties alone; they require effective collaboration with colleagues and the students' guardians (community). An educator must also serve as a positive role model for students, as their role is not only that of an instructor but also a leader and exemplar for students.

During the research conducted using the discovery learning model, the learning atmosphere became livelier, and students exhibited greater enthusiasm for learning the material provided by the researcher. However, constraints included time limitations and the adjustment of students to the new instructional approach, which had yet to be previously implemented in the classroom. These constraints were encountered during the implementation of the discovery learning model. The primary factor was that educators must thoroughly master the discovery learning model. To address this, the researcher limited the time for discussion during the learning process to ensure sufficient time for instruction.

Based on the One-Sample T-Test, the obtained Sig. value (2-tailed) is $0.000 < 0.05$, and the calculated t-value is $98.930 > \text{the t-table value } 48.784$. Therefore, it can be concluded with a 95% confidence level that there is a positive and significant influence of the discovery learning model on students' learning outcomes in civic education and nationalism for fourth-grade students at SD Muhammadiyah 2 Waru. The research seeks to ascertain the extent of the influence of the discovery learning teaching model aided by the cultural diversity image media on students' cognitive learning outcomes. The research analyzed descriptive statistical hypotheses from the examined samples, which include pretest and posttest scores. For the pretest scores, the average learning outcome was 68.25, while the posttest scores yielded an average learning outcome of 94.70. The research sample comprised 20 students. The Standard Deviation for pretest was 6.25658; for posttest, it was 4.28092. The Std. Error Mean for pretest was 1.39901, and for posttest, it was 0.95724. As the average learning outcome for pretest (68.25) $<$ posttest (94.70), it can be descriptively interpreted that there is a difference in the average learning outcomes between pretest and posttest. The researcher concludes that the discovery learning teaching model aided by the cultural diversity image media substantially influences daily instructional activities.

This research is aligned with a study conducted by Dwi Rahayu titled "*Penerapan Model Discovery Learning dengan Media Citra Nonfoto untuk Meningkatkan Hasil Belajar Pada Materi Penginderaan Jauh di Kelas XII-PIS1 SMAN 2 Pematang Siantar*."¹⁰ The research aims to determine the impact of applying the Discovery Learning teaching model to enhance the learning outcomes of the social studies subject. It is an experimental research design conducted in a single session. The experimental class scored 82.08, while the control class received 70.22%. The congruence between the above study and the present one lies in utilizing the Discovery Learning teaching model, with the difference being the subject matter—social studies in the former and civic education (PKn) in the latter.

¹⁰ Adventina Dwi Rahayu, "PENERAPAN MODEL DISCOVERY LEARNING DENGAN MEDIA CITRA NONFOTO UNTUK MENINGKATKAN HASIL BELAJAR PADA MATERI PENGINDERAAN JAUH DI KELAS XII-PIS1 SMAN 2 PEMATANG SIANTAR" (UNIMED, 2018).

Another related study is by Ria Fita Lestari (2013) titled " *Pengaruh Media Kartu Bergambar Terhadap Hasil Belajar IPS Pada Siswa Kelas IV SD N Kotagede 5 Yogyakarta Tahun Ajaran 2012/ 2013.*" The research utilizes a quantitative method applied to the fourth-grade class of SDN Kotagede 5 Yogyakarta, using a pretest-posttest experimental one-group design¹¹.

In conclusion, the discovery learning model allows students to engage in their learning environment, enabling them to take responsibility for discovering new aspects in their surroundings. By connecting classroom learning with real-life discoveries, students become more active in honing their critical thinking skills to solve problems in the learning process.

CONCLUSION

Based on the research findings presented in the previous chapter, the conclusion drawn from this study is that there is an influence of the discovery learning teaching model aided by the cultural diversity image media on the learning outcomes of fourth-grade students in the subject of civic education at SD Muhammadiyah 2 Waru. The pretest results obtained an average score of 68.25, while the posttest yielded an average score of 94.7. The t-test calculation on the posttest yielded a t-value smaller than the t-table value, indicating a difference in the average scores. The increase from pretest (71.17) to posttest (96.7) signifies a positive trend in the learning outcomes.

Based on the above research results, it is evident that the posttest scores are higher than the pretest scores. Thus, the researcher can conclude that applying the discovery learning teaching model aided by the cultural diversity image media influences the learning outcomes of fourth-grade students in civic education at SD Muhammadiyah 2 Waru.

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¹¹ Ria Fita Lestari, "Pengaruh Media Kartu Bergambar Terhadap Hasil Belajar IPS Pada Siswa Kelas IV SD N Kotagede 5 Yogyakarta Tahun Ajaran 2012/2013," *Yogyakarta: Universitas Negeri Yogyakarta* (2013).

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