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# Implementation of GQGA Learning Strategy to Improve Student Learning Outcomes in Class IV Social Science Learning

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**ABSTRACT**

This study was motivated by the suboptimal learning outcomes among Class IV students at MINU Al-Murtadlo Bululawang, Malang, which served as the research sample. The researcher identified that the social sciences component of the integrated IPAS curriculum is perceived as monotonous, primarily due to its heavy reliance on memorizing diverse concepts, contributing to the student's poor academic performance. This study examines the impact of the Giving Question and Getting Answer (GQGA) strategy on students' learning outcomes in IPAS on Ethnic Diversity in Indonesia using a pre-experimental, one-group pre-test and post-test design. Data analysis revealed a t-test result of 0.000, below the 0.05 significance level, leading to the rejection of the null hypothesis. A mixed participatory class action research (PCAR) method showed that the GQGA strategy significantly improves students' learning outcomes. In Cycle I, student performance had a 50.00% completion rate and a class average of 64.72%. By Cycle II, this improved to a 72.22% completion rate and an average of 82.78%. These results indicate a consistent enhancement in student outcomes. It is recommended that students independently explore solutions, particularly in IPAS, which involves diverse concepts and materials.

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## INTRODUCTION

The Independent Curriculum is a newly introduced framework incorporating diverse learning activities and original visual content. It aims to enhance student engagement and optimize learning by allowing students ample time to deepen their understanding and strengthen their competencies[1]. A notable impact of this curriculum's implementation is integrating science and social studies into a combined subject, IPAS (integrating natural sciences and social sciences). This integration presents a novel challenge for teachers and students, as the government-issued learning resources still distinguish between science and social studies chapters, lacking full integration of the two disciplines.

Social studies, in particular, pose a significant challenge, often perceived as complex and unengaging due to their extensive range of information and concepts, such as history, geography, economics, and culture. The reliance on lengthy texts and descriptive information necessitates adjustment for students, impacting their learning outcomes, often seen as suboptimal. Contributing to this issue may be the limited classroom time allocated to social studies and teachers' lack of awareness about the potential benefits of curriculum integration as a solution. To address this, teachers must adopt engaging methods or strategies designed to spark students' interest in social studies within the framework of the Independent Curriculum, which emphasizes active student participation. Furthermore, this effort is crucial considering social studies is a crucial part of the curriculum, teaching individuals to become responsible citizens[2].

Observations in Grade IV at MINU Al-Murtadlo Sudimoro Bululawang revealed that the learning objectives, as reflected in student outcomes, have not been optimally achieved. This is evident from students' daily grades, which remain below the Minimum Completeness Criteria (MCC). A significant factor contributing to this issue is the prevalent teaching method, where the teacher predominantly leads while students passively listen and take notes. This approach often results in a monotonous and unproductive classroom environment, with limited student engagement and participation. To address this challenge, it is recommended that teachers implement classroom action research as a potential solution. Engaging in action research offers a strategic framework for tailoring research findings, empowering educators

[1] Muhammad Muzakki, Budi Santoso, and Hijrah Nur Alim, "Potret Implementasi Kurikulum Merdeka Berbasis Islami Di Sekolah Penggerak," *Jurnal Papeda: Jurnal Publikasi Pendidikan Dasar* 5, no. 2 (July 26, 2023): 167–78, https://doi.org/10.36232/jurnalpendidikandasar.v5i2.4063.

[2] Jay Morilla De Loreto et al., "A Phenomenological Study on the Challenges and Problems of New Social Studies Teachers," *International Journal of Social Sciences & Educational Studies* 6, no. 2 (2019), https://doi.org/10.23918/ijsses.v6i2p23.

to tackle specific questions, concerns, or issues within their classrooms, schools, or communities[3]. By leveraging this approach, teachers can drive meaningful and impactful change that directly addresses their unique challenges and goals. Furthermore, class action research can solve problems in the classroom and optimize the development of teachers and students[4]. This type of research is precious because it directly addresses the practical challenges that teachers and students encounter in the learning process. By focusing on the specific issues in the classroom, the teacher can make informed decisions about the most suitable methodological approaches. This targeted approach not only enhances the effectiveness of teaching strategies but also aligns them more closely with the needs and goals of the students, ultimately leading to improved educational outcomes.

The Giving Question and Getting Answer (GQGA) strategy is recommended to enhance student learning outcomes and engagement. GQGA is a pedagogical approach designed to foster increased classroom activity by encouraging students to actively participate through questioning, answering, and sharing ideas or opinions, which are then articulated through presentations. The GQGA active learning approach necessitates increased student engagement, fostering greater motivation and enthusiasm throughout the learning process[5]. By incorporating classroom action research alongside the GQGA strategy, teachers can develop purposeful questioning techniques that effectively motivate student engagement and active participation in the learning process. Intentional questioning involves posing thoughtful and purposeful inquiries and is a critical skill for educators to help students develop a deeper understanding, critical thinking, and a thirst for learning[6]. Thus, students can develop skills in formulating effective questions and enhancing their understanding of specific topics during class discussions.

Research has demonstrated that posing inferential questions stimulates a deeper and more comprehensive comprehension of texts. It has also been shown that students require instruction in suitable strategies for responding to these questions, particularly when

[3] Craig Mertler and Adam Hartley, "Classroom-Based, Teacher-Led Action Research as a Process for Enhancing Teaching and Learning," *Journal of Educational Leadership in Action* 4, no. 2 (March 1, 2017), https://doi.org/10.62608/2164-1102.1056.

[4] Sally Baricaua Gutierez and Heui-Baik Kim, "Peer Coaching in a Research-Based Teachers' Professional Learning Method for Lifelong Learning: A Perspective," *Alberta Journal of Educational Research* 64, no. 2 (June 22, 2018): 214–21, https://doi.org/10.11575/ajer.v64i2.56327.

[5] Nurlev Avana, "Pengaruh Pembelajaran Aktif Tipe Giving Questions And Gettimg Answers Terhadap Pemahaman Konsep Mahasiswa Pada Pembelajaran Statistik," *Jurnal Tunas Pendidikan* 1, no. 1 (December 8, 2018): 91–100, https://ejournal.ummuba.ac.id/index.php/pgsd/article/view/81.

[6] Angela K. Salmon and Maria Ximena Barrera, "Intentional Questioning to Promote Thinking and Learning," *Thinking Skills and Creativity* 40 (June 1, 2021): 100822, https://doi.org/10.1016/j.tsc.2021.100822.

analyzing multiple texts[7]. Moreover, the GQGA strategy has previously demonstrated efficacy in improving students' academic performance in the Bahasa Indonesia subject. Consequently, the GQGA strategy is a pertinent choice for IPAS, as it enables students to practice formulating effective questions to address problems or deepen their understanding of the topics. This strategy encourages students to explore their opinions and knowledge, positioning teachers primarily as facilitators. The implementation of GQGA necessitates collaborative group work, allowing students to engage in discussions and learn from one another within their groups. Through discussion in a group, students will feel more relaxed and motivated in the learning process [8].

## RESEARCH METHOD

This research was conducted at MINU Al-Murtadlo Sudimoro, with the research site selected based on initial observations by the researcher. The subjects included all Grade IV students, comprising 18 participants (13 boys and 5 girls). This study employs the Classroom Action Research (CAR) method, following the CAR model developed by Kemmis and McTaggart. The methodology involves several distinct phases: (1) planning, (2) action, (3) observation, and (4) reflection. Action research is a valuable approach to enhancing teachers' instructional abilities and gaining deeper insights into their roles as educators, their classrooms, and their students[9].

In this study, the researcher employs Participatory Classroom Action Research (PCAR), utilizing a participatory action research approach. Participatory action research (PAR) is a methodology that emphasizes the significance of experiential knowledge in addressing issues arising from inequitable and detrimental social systems and developing and implementing alternative solutions[10]. PAR entails the active involvement and leadership of individuals directly impacted by the issues under investigation. These individuals engage in systematic research to generate new insights and promote transformative social change.

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[7] Núria Castells et al., "Improving Questioning–Answering Strategies in Learning from Multiple Complementary Texts: An Intervention Study," *Reading Research Quarterly* 57, no. 3 (2022): 879–912, https://doi.org/10.1002/rrq.451.

[8] Moh Khoridatul Huda, "Penerapan Pembelajaran Kooperatif Tipe Investigasi Kelompok Untuk Meningkatkan Kemampuan Pemecahan Masalah Matematika Siswa pada Materi Persamaan Garis Lurus," *Infinity Journal* 5, no. 1 (February 1, 2016): 15–24, https://doi.org/10.22460/infinity.v5i1.p15-24.

[9] Mohammad Ali Nasrollahi, Pramela Krish, and Noorizah Mohd Noor, "Action Research in Language Learning," *Procedia - Social and Behavioral Sciences*, Cyprus International Conference on Educational Research (CY-ICER-2012) North Cyprus, US08-10 February, 2012, 47 (January 1, 2012): 1874–79, https://doi.org/10.1016/j.sbspro.2012.06.916.

[10] Flora Cornish et al., "Participatory Action Research," *Nature Reviews Methods Primers* 3, no. 1 (April 27, 2023): 1–14, https://doi.org/10.1038/s43586-023-00214-1.

Following this principle, the researcher conducts PCAR by collaborating closely with the class teacher responsible for delivering the subject matter, thereby integrating their perspectives and expertise into the research process.

The research methodology employs a mixed-methods approach, integrating qualitative and quantitative techniques. The qualitative component involves interviews and developing the class action plan, while the quantitative component focuses on analyzing students' learning outcomes. Data collection methods include observation, conducted during the pre-cycle and each subsequent cycle; written tests, which serve as the primary data source for each cycle; and interviews, which provide supplementary data for the initial pre-cycle. Data will be gathered using various instruments, including observation guidelines, test sheets with corresponding grids, and additional observation guidelines.

After data collection is carried out, the data needs to be analyzed with the formula

$$KB = \frac{NI}{N} \times 100$$

with KB, NI, and N sequentially declaring the completeness of learning, the number of students who obtained a score greater than $75$, and the number of students who participated in learning. The GQGA strategy is considered effective when the average percentage increase between pre-test and post-test scores falls within $60 - 79\%$, typically categorized as "good" or "complete." The test results will subsequently be subjected to quantitative analysis, employing a series of statistical tests, including descriptive statistics, normality tests, homogeneity tests, t-tests, and F-tests.

The final step in the research is reflection. This stage is crucial to review the learning process outcomes and to decide on the following strategies to achieve the research objectives[11]. This stage is critical in evaluating the outcomes of the learning process, as it involves a comprehensive assessment of whether the predetermined objectives have been achieved. Through meticulous analysis of the results, educators and researchers can ascertain the efficacy of the instructional methods employed and identify any existing deficiencies in knowledge or skills. This evaluation process is instrumental in guiding the selection of future strategies, ensuring that subsequent actions are more effectively aligned with the overarching research objectives. Such a methodical approach is essential for enhancing the learning process and optimizing outcomes to achieve the desired educational or research goals.

[11] Ajat Rukajat, *Pendekatan Penelitian Kuantitatif: Quantitative Research Approach*, 1st ed. (Yogyakarta: CV Budi Utama, 2018).

## RESULT AND DISCUSSION

This research was conducted over two cycles, involving the implementation of several specific actions, namely:

a. Pre-Action

The pre-action phase of this study included observational assessments of the learning process within the classroom, interviews with the Grade IV homeroom teachers, and a pre-test administered to all Grade IV students, which yielded the following results:

1. Observation

   Observational results indicated that while the learning tools utilized are aligned with the educational process, the methods employed by educators are insufficiently varied. This lack of methodological diversity contributes to a monotonous learning environment, leading to student disengagement. Consequently, the classroom atmosphere is deemed less conducive, as evidenced by students' inattentiveness, frequent absences from class, and careless completion of assignments. These factors collectively impact student performance, resulting in scores that do not meet the Minimum Completeness Criteria (MCC).

2. Interview results

   Social studies, particularly within the realm of social sciences, can often be perceived as monotonous by some students due to its emphasis on theoretical concepts and extensive material content. Implementing the Giving Question and Getting Answer (GQGA) strategy introduces notable improvements, as it fosters increased student activity, encourages students to ask and answer questions, and facilitates the expression of opinions. This is primarily attributed to the competitive elements introduced within group settings, which enhance the overall classroom environment, making learning more conducive and effective. This strategy is anticipated to be refined and adapted to align with contemporary educational practices.

3. Pretest

   The pre-test results revealed an average score of 50 among the students. Of the 18 participants, 3 students (16.67%) achieved a passing grade, while 15 (83.33%) did not meet the completion criteria.

b. Action Planning

In the action planning phase, the researcher must undertake several key tasks: applying for research approval, developing and compiling all necessary instruments, and submitting

these instruments, comprising teaching modules, pre-tests, post-tests, and observation guidelines, to expert validators for validation. This process ensures the accuracy and validity of the instruments used to implement actions, with all three types of instruments being deemed suitable for use based on the validators' assessments.

c. Implementation of Actions

This activity was conducted over two cycles, each consisting of two sessions, to obtain the results summarized in Table 2. Interpretation of Table 2 is guided by the criteria for the completeness of student learning, as outlined in Table 1[12].

Table 1: Criteria for Completeness of Student Learning

| Percentage (%) | Category |
|---|---|
| $80 - 100$ | Highly Effective/Very Complete |
| $60 - 79$ | Effective/Complete |
| $40 - 59$ | Quite Effective/Incomplete |
| $20 - 39$ | Less Effective/Incomplete |
| $< 20$ | Ineffective/Incomplete |

Based on the data presented in Table 2, the analysis of the intervention variable indicates that the action hypothesis was successfully addressed. The results demonstrate that the implemented intervention effectively resolved the identified problem and confirmed the validity of the hypothesis posited for this study.

Table 2: Learning Outcomes of Each Cycle

| No. | Aspect | Study Results | | |
|---|---|---|---|---|
| | | Pre-cycle | Cycle I | Cycle II |
| 1. | Minimum Mark | 20 | 25 | 30 |
| 2. | Maximum Mark | 75 | 85 | 100 |
| 3. | Average Score | 50 | 64,72 | 82,78 |
| 4. | The total number of students who pass (Percentage) | 3 (16,67%) | 9(50%) | 13(72,33%) |
| 5. | The total number of students who do not pass (Percentage) | 15(83,33%) | 9(50%) | 5(27,77%) |

To substantiate the findings of this study, the researcher employed a statistical descriptive test, a normality test, and a homogeneity test. Descriptive statistical tests are

[12] Eko Putro S Widoyoko, *Penilaian Hasil Pembelajaran Di Sekolah*, 3rd ed. (Yohyakarta: CV Pustaka Pelajar, 2018).

employed to systematically organize and process data, enabling the presentation of a clear and comprehensive representation of the conditions or events from which the data is derived[13]. Descriptive statistical tests are fundamental instruments in data analysis employed to methodically organize, summarize, and elucidate the characteristics inherent within a dataset. These tests facilitate the clear and coherent presentation of data, enabling researchers to effectively communicate the data's core attributes and underlying patterns at a glance. Table 3 provides a detailed descriptive statistical analysis of student test results. This table systematically summarizes the key statistical measures, including mean, median, standard deviation, and range, reflecting the central tendency and dispersion of the test scores within the student cohort. Descriptive statistics offer an essential overview of the data distribution, facilitating an understanding of student performance trends and variability.

Table 3: Descriptive Statistical Analysis

| Descriptive Statistics | | | | | | |
|---|---|---|---|---|---|---|
| | N | Minimum | Maximum | Mean | Std. Deviation | Variance |
| Pre-cycle | 18 | 20 | 75 | 50.00 | 19.629 | 385.294 |
| Cycle I | 18 | 25 | 85 | 64.72 | 18.188 | 330.801 |
| Cycle II | 18 | 30 | 100 | 82.78 | 18.489 | 341.830 |
| Valid N (listwise) | 18 | | | | | |

Table 3 presents the descriptive statistical analysis of student test results across the pre-cycle, Cycle I, and Cycle II. The analysis reveals a notable increase in the class average, rising from 50 to 82.78. However, the standard deviation remains relatively high at approximately 18 for each cycle, indicating a substantial dispersion of scores from the mean. This high variance suggests that student performance varied significantly, with some students achieving scores markedly higher or lower than the class average, potentially highlighting a considerable disparity in material comprehension.

The normality test was conducted to determine whether the data followed a normal distribution, with the Kolmogorov-Smirnov (K-S) test serving as the primary method for assessing normality[14]. Concurrently, the t-test was utilized to examine the effect of the independent variable—specifically, the implementation or absence of the GQGA strategy in the instruction of Social Science and the material on Cultural Diversity in Indonesia—on the

[13] Lilih Deva Martias, "Statistika Deskriptif Sebagai Kumpulan Informasi," *Fihris: Jurnal Ilmu Perpustakaan Dan Informasi* 16, no. 1 (June 30, 2021): 40–59, https://doi.org/10.14421/fhrs.2021.161.40-59.
[14] Asghar Ghasemi and Saleh Zahediasl, "Normality Tests for Statistical Analysis: A Guide for Non-Statisticians - PMC," 2012, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3693611/.

dependent variable, which is the cognitive learning outcomes of fourth-grade students at MINU Al-Murtadlo, Bululawang, Malang. The t-test, as a statistical hypothesis test, evaluates sample means to draw inferences about population means[15]. It assesses whether the observed difference between the means of the treatment (cycle 1 or 2) and control groups (pre-cycle) is statistically significant, thereby testing the hypothesis concerning the treatment's impact.

The normality test was conducted using the Kolmogorov-Smirnov method in SPSS 26, as presented in Table 4, yielded a significance value of 0.200. Since this value exceeds the 5% significance threshold (0.05), specifically with $0.200 > 0.05$, then we fail to reject the null hypothesis, suggesting that the data do not significantly deviate from a normal distribution with the given mean and standard deviation. This confirmation of normality validates the appropriateness of proceeding with further analysis, specifically the t-test.

A homogeneity test is necessary to validate and confirm that the data group originates from the same population. This test ensures the measured population is homogeneous, enhancing the measurement outcomes' validity and accuracy. The primary objective of the homogeneity test is to verify that multiple populations under consideration are indeed from the same population, characterized by uniform value variability. This study's data pertains to students' test results on IPAS, focusing on cultural diversity in Indonesia. As illustrated in Table 5, the significance value (Sig.) based on the mean is 0.847, more significant than 0.05. Consequently, it can be concluded that the variance in the learning outcomes of science students across the Pre-cycle, Cycle I, and Cycle II is homogeneous, indicating consistency across these groups.

[15] Jim Frost, "T Test Overview: How to Use & Examples," Statistics By Jim, September 4, 2023, https://statisticsbyjim.com/hypothesis-testing/t-test/.

Table 4: Normality Test

| One-Sample Kolmogorov-Smirnov Test | | | |
|---|---|---|---|
| | | | Unstandardized Residual |
| N | | | 18 |
| Normal Parameters[a,b] | Mean | | .0000000 |
| | Std. Deviation | | 8.41412576 |
| Most Extreme Differences | Absolute | | .131 |
| | Positive | | .131 |
| | Negative | | -.093 |
| Test Statistic | | | .131 |
| Asymp. Sig. (2-tailed)[c] | | | .200[d] |
| Monte Carlo Sig. (2-tailed)[e] | Sig. | | .561 |
| | 95% Confidence Interval | Lower Bound | .551 |
| | | Upper Bound | .571 |

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.
d. This is a lower bound of the true significance.
e. Lilliefors' method based on 10000 Monte Carlo samples with starting seed 221623949.

Table 5: Homogeneity Test

| | | Levene Statistics | df1 | df2 | Sig. |
|---|---|---|---|---|---|
| Results | Based on Mean | .166 | 2 | 51 | .847 |
| | Based on Median | .163 | 2 | 51 | .850 |
| | Based on Median with adjusted df | .163 | 2 | 49.704 | .850 |
| | Based on trimmed mean | .199 | 2 | 51 | .820 |

## DISCUSSION

Implementing the GQGA strategy during Cycles I and II has led to significant positive changes in the learning experience. This is evidenced by a marked increase in student engagement, with previously passive students becoming more active participants in the learning process. The strategy has fostered tremendous enthusiasm among students and stimulated critical thinking. As a result, the learning environment, initially monotony, has become more engaging and enjoyable due to the incorporation of game-based elements within the GQGA strategy.

In the first cycle, 9 students achieved completion while 9 students did not. The reasons for the lack of completion among the latter group include:

a. The classroom conditions remained less than conducive due to some groups' inability to settle down, primarily because a student encountered a peer with similar disruptive habits, specifically frequent talking during lessons.

b. The question-and-answer sessions between groups, a vital component of the GQGA strategy, contributed to increased noise levels in the classroom as students vied to ask and answer questions, leading to a somewhat chaotic atmosphere.
c. The researcher struggled to effectively manage the class, which adversely affected the implementation of the strategy and reduced its overall effectiveness.
d. Although some students improved their grades, others showed no change. A follow-up with the class teacher revealed that these students' abilities remained below their peers.

In response to the reflection results from Cycle I, the researcher implemented several adjustments: 1) the development of comprehensive learning materials, including teaching modules, teachers' handwritten science books, students' handwritten science books, and test sheets; 2) the enhancement of the action plan from Cycle I, informed by reflection results, for application in Cycle II; and 3) the compilation of research tools, such as observation sheets, assessment sheets, and documentation. These adjustments led to improved outcomes in Cycle II, where 13 students achieved completion while 5 students did not. The incomplete status of these 5 students is attributed to their cognitive abilities being lower than their peers. The researcher selected the GQGA strategy due to its emphasis on active student participation in group work, which fosters increased confidence in formulating and answering questions posed by peers.

According to Bloom, learning outcomes can be seen from at least three domains: cognitive, psychomotor, and affective[16]. Based on these three domains, in the context of learning sciences, the GQGA strategy in the cognitive domain is more dominant. It is formed based on the results of actions, knowledge abilities, or knowledge[17]. The progression of students' abilities from the pre-cycle through Cycles I and II demonstrates a noticeable and significant enhancement in their skills. This improvement is evidenced by the development observed throughout the research cycles.

## CONCLUSION

The research findings from Cycles I and II indicate a notable improvement in student learning outcomes following the implementation of the GQGA strategy. Data from the pre-cycle reveal that only 3 students achieved completion, representing 16.67% of the cohort.

[16] Md Hoque, "Three Domains of Learning: Cognitive, Affective and Psychomotor," *The Journal of EFL Education and Research* 2, no. 2 (January 1, 2017): 45–51.
[17] Ina Magdalena et al., "Tiga Ranah Taksonomi Bloom Dalam Pendidikan," *Edisi: Jurnal Edukasi Dan Sains* 2, no. 1 (June 30, 2020): 132-`139, https://ejournal.stitpn.ac.id/index.php/edisi/article/view/822.

Following the implementation of Cycle I, there was a measurable improvement, with 9 students achieving completion, reflecting an average of 50%. The most significant progress was observed in Cycle II, where 13 students completed the tasks, resulting in an average completion rate of 72.22%. This progressive increase demonstrates the effectiveness of the GQGA strategy in enhancing student learning outcomes across the cycles. This consistent upward trend in student performance across the cycles underscores the GQGA strategy's role in fostering academic achievement.

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