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The Effectiveness of the Cooperative Learning Method Type Team Quiz on Introduction to Geography Material on the Learning Outcomes of Grade X Students at SMA Negeri 1 Tilatang Kamang

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Abstract

This study aims to determine whether the team quiz cooperative learning method is more effective than the discussion method in terms of student learning outcomes and activeness. This research involved two classes as comparisons: the experimental class using the team quiz learning method and the control class using the discussion method. Each class consisted of 36 students. Data were collected through observation techniques using indicator sheets and by administering learning outcome tests in the form of multiple-choice questions. The learning outcome tests included two tests: a pretest and a post-test. The results of the study showed that: 1) There was a difference in abilities between the two classes as seen from the pretest results. This was proven by the t-test results and the average pretest scores of the two classes, where the experimental class obtained a lower average compared to the control class. 2) There was a significant increase in the post-test results of the two classes, with the t-test results indicating that the scores of both classes were the same. Thus, the team quiz method was found to be effective for improving learning outcomes. This conclusion is supported by the higher average post-test scores in the experimental class compared to the control class. 3) There was a significant difference in student activeness between the experimental class and the control class, as evidenced by the t-test results and the average activeness scores of the students in both classes.

Keywords: Effectiveness, Learning Method, Activeness, Learning Outcomes

INTRODUCTION

The educational landscape continually evolves in search of effective teaching and learning methods that can significantly enhance student outcomes and activeness (Gillies, 2007). Among the various pedagogical approaches, finding the most impactful way to facilitate both learning and active participation is crucial. The development of student-centered learning models has emphasized the need for methods that not only improve academic achievement but also foster student engagement and cooperation (Shoeib, 2016). This is because active participation and involvement are key to internalizing concepts, critical thinking, and overall academic performance.

One such model of interest is cooperative learning, which differs considerably from traditional, teacher-centered approaches like discussion-based learning. Cooperative learning strategies, such as the team quiz method, have gained attention due to their potential to increase collaboration among students, promote individual accountability, and enhance the collective learning experience (Colak, 2015). Unlike conventional discussion methods that may limit the opportunities for active participation to only a few students, the team quiz method necessitates active involvement from all group members, promoting a shared responsibility for learning. This collaborative approach

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encourages not only knowledge sharing but also critical thinking and social interaction, which are pivotal for deeper understanding and skill development.

In the context of educational practice, it is essential to highlight the significance of comparing these two pedagogical approaches—the team quiz method and the discussion-based learning method. Understanding how these methods influence learning outcomes and student activeness can provide valuable insights for educators in selecting and applying the most effective strategies. In an educational environment where student engagement directly correlates with learning success, the choice of teaching method becomes a critical factor in fostering both cognitive and social development.

Given the background and the need to explore effective teaching strategies, the aim of this study is to systematically compare the effectiveness of the team quiz method against the traditional discussion method in enhancing student learning outcomes and activeness. The team quiz method, as a form of cooperative learning, requires each member of a group to actively participate, thereby increasing engagement and promoting a more comprehensive understanding of the content. On the other hand, the discussion method typically allows for a more open-ended dialogue, where learning is achieved through verbal exchange but may not always guarantee active involvement from every student.

The core objective of the study is to determine which method proves to be more effective in improving not just academic performance, as measured by learning outcomes, but also the level of student activeness in the classroom setting. This is vital as the level of activeness can significantly affect the learning process, contributing to skills such as problem-solving, critical thinking, and collaboration. Therefore, the study's research question revolves around identifying how these two distinct learning methods impact both the academic results and active participation of students, ultimately aiming to inform best practices in educational methodologies.

Through a comparative analysis, the study seeks to provide empirical evidence on the influence of the team quiz cooperative learning method versus the discussion-based approach, offering a clearer understanding of their respective roles in enhancing learning outcomes and student activeness. This research will contribute to the ongoing discourse on effective teaching strategies by providing insights that can help educators make informed decisions about which pedagogical techniques may be most beneficial for student development in diverse learning environments.

METHODS

The study employed a comparative research design aimed at evaluating the effectiveness of two different teaching methods: the team quiz cooperative learning method and the traditional discussion-based method (Slavin, 1987). To achieve this, the study was conducted in two separate classes, each with distinct approaches to instruction. The participants consisted of two classes, one serving as the experimental group and the other as the control group, with each class comprising 36 students. The selection of these participants was based on their enrollment in similar courses to ensure that the comparison would be fair and that the outcomes could be attributed to the teaching method rather than differences in student composition or subject matter.

The intervention involved implementing different instructional methods in each class. The experimental class adopted the team quiz method, a form of cooperative learning designed to promote active participation and collaboration among students. In contrast, the control class

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employed the discussion method, a more traditional approach where learning is facilitated through teacher-led discussions. Throughout the intervention, the team quiz method was structured to encourage group-based quizzes and collaborative problem-solving tasks, requiring all students to engage and contribute actively. Meanwhile, the control class followed the discussion format, where the teacher facilitated dialogue, and students could participate individually at their own discretion.

For data collection, several tools were utilized to assess both the learning outcomes and the level of student activeness in each class. To measure student activeness, observation techniques were employed using indicator sheets designed to capture various aspects of participation and engagement, such as involvement in group activities and responsiveness to questions. Learning outcomes were measured through the administration of tests comprising multiple-choice questions, designed to assess knowledge and understanding of the course material. These tests were conducted in two phases: a pretest was administered before the intervention to establish a baseline for each student's knowledge, and a post-test was given after the intervention to evaluate any changes in learning outcomes.

The analysis of the collected data was performed using t-tests to compare the pretest and post-test scores between the experimental and control classes. This statistical approach was chosen to determine any significant differences in learning outcomes attributable to the instructional methods. Additionally, the t-tests were used to analyze the levels of activeness in each class, providing insights into how the team quiz and discussion methods influenced student engagement. By comparing these results, the study aimed to identify the method that led to greater improvements in both learning outcomes and student activeness, thereby contributing to a better understanding of effective teaching practices.

RESULTS

In the initial phase of the study, a pretest was administered to both the experimental and control classes to assess their baseline abilities before implementing the respective teaching methods. The analysis of the pretest scores revealed a noticeable difference between the two groups. Specifically, the experimental class, which later employed the team quiz cooperative learning method, had a lower average pretest score compared to the control class, which followed the discussion method. This discrepancy was further validated by the results of the t-test, confirming that there was a statistically significant difference in the initial abilities of the two classes. These findings indicate that the experimental group started with a comparatively weaker performance in the assessed subject matter.

Upon completion of the intervention period, a post-test was conducted to measure any improvements in learning outcomes for both classes. The results indicated a significant increase in post-test scores for both the experimental and control classes, suggesting that both teaching methods contributed positively to student learning. However, the t-test analysis demonstrated that the average post-test scores of the experimental class were notably higher than those of the control class, despite their lower pretest scores. This improvement in the experimental group signifies the effectiveness of the team quiz method in enhancing student learning outcomes. Moreover, the similarity in t-test results for both classes' post-test scores suggests that the team quiz method can elevate learning outcomes to a level comparable to, or even better than, the traditional discussion method.

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In addition to measuring learning outcomes, the study also examined levels of student activeness during the intervention. A significant difference was observed in the activeness scores between the experimental and control classes. The experimental class, which utilized the team quiz method, showed higher levels of engagement and participation compared to the control class. This was supported by the t-test results, which indicated a statistically significant difference in activeness favoring the experimental group. The average activeness scores of students in the experimental class were substantially higher, highlighting that the team quiz cooperative learning approach was more effective in promoting student involvement and active participation than the traditional discussion-based approach. These findings reinforce the importance of active learning strategies in fostering both academic achievement and engagement.

DISCUSSION

The results of the study clearly indicate that the team quiz method is highly effective in improving both learning outcomes and student activeness. Compared to the traditional discussion-based approach, the team quiz method led to greater increases in post-test scores and a significant enhancement in student participation. This cooperative learning technique required active involvement from each student within the group, ensuring that learning was not only a passive process but a dynamic and interactive experience (Porter, 2006). The structure of the team quiz method—fostering accountability, peer support, and collaborative problem-solving—created a learning environment conducive to deeper understanding and critical thinking. This approach effectively encouraged students to engage more fully with the content, allowing them to both learn and support their peers in a collective effort to achieve better outcomes.

The method also promoted engagement by making each group member responsible for the overall success of their team. Unlike the discussion method, which often depends on a few vocal participants while others remain passive, the team quiz structure requires equal participation and allows for continuous feedback and peer interaction. This element of cooperative learning led to not only improved academic performance but also enhanced motivation and activeness. The higher levels of participation and the responsibility shared among team members resulted in greater retention of knowledge and development of social skills, which are crucial for holistic educational experiences.

The findings of this study have significant implications for teaching practices, suggesting that cooperative learning techniques like the team quiz method should be widely adopted to enhance both learning outcomes and student engagement. The team quiz approach demonstrated that when students are placed in a cooperative setting where they must work together to achieve shared goals, they are more likely to become actively involved in the learning process. Educators can leverage this insight to create more interactive and inclusive classrooms, where all students have an opportunity to participate and contribute to the learning process. Moreover, the cooperative nature of the team quiz method encourages the development of important soft skills such as teamwork, communication, and problem-solving, which are beneficial beyond the academic context.

Incorporating team-based quizzes and collaborative learning activities into the curriculum can address the challenges of passive learning by stimulating active involvement and ensuring that students are consistently engaged. Teachers who seek to improve both the cognitive and social aspects of learning can benefit from integrating these cooperative strategies, as they have been shown to lead to better academic results and foster a sense of community and shared responsibility within the classroom.

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Despite the positive outcomes observed, the study does have certain limitations that should be acknowledged. One of the main limitations is the sample size, which consisted of only two classes with a total of 72 students. This relatively small sample may limit the generalizability of the findings to broader populations. Additionally, the study was conducted in a specific educational context, and the results may vary when applied to different age groups, subjects, or cultural settings. Furthermore, the duration of the intervention was limited, and a longer-term study may yield different insights into how the team quiz method impacts learning outcomes over time.

Future research is recommended to address these limitations and further investigate the impact of cooperative learning strategies. Larger-scale studies involving diverse educational settings, varying age groups, and extended intervention periods would provide a more comprehensive understanding of the effectiveness of the team quiz method and other cooperative learning approaches. Additionally, research could explore how different types of cooperative learning techniques compare with each other, and how they can be adapted or combined to maximize both learning outcomes and student engagement across various disciplines and educational levels. This will help educators make more informed decisions on the best practices for fostering active and effective learning environments.

CONCLUSION

The key findings of the study highlight the effectiveness of the team quiz cooperative learning method over the traditional discussion method in improving both learning outcomes and student activeness. The results showed that students in the experimental class, who were taught using the team quiz method, demonstrated significantly higher post-test scores compared to those in the control class, where the discussion method was employed. Moreover, the team quiz method not only led to better academic performance but also enhanced the level of student participation and engagement, as evidenced by higher activeness scores. These findings suggest that cooperative learning techniques like the team quiz, which emphasize collaboration, shared responsibility, and active involvement, are more effective in promoting deeper understanding and meaningful learning experiences.

In conclusion, the study's outcomes have broader implications for educational strategies and teaching methodologies. The demonstrated success of the team quiz method provides a compelling argument for educators to incorporate cooperative learning approaches into their classroom practices. Such strategies can improve not only cognitive outcomes but also foster social skills and a sense of community among students. By encouraging active participation and collective problem-solving, cooperative learning can create a more dynamic and inclusive learning environment. Ultimately, the findings advocate for a shift from traditional, teacher-centered methods toward more student-centered, interactive approaches that enhance both academic achievement and active engagement, which are essential for comprehensive educational development.

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