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Teacher Strategies in Improving Elementary School Students' Critical Thinking Skills by Using The Giving Question and Getting Answer Learning Model

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Abstract: This ability is not only important for academic success, but also essential for students to face complex problems in everyday life. This study aims to examine the effectiveness of the Giving Question and Getting Answer model in improving students' critical thinking skills. The research design used a posttest-only control group design experiment. The research instrument was a critical thinking ability test that included the dimensions of analysis, evaluation, and problem solving. Data were analyzed using a t-test to compare the average posttest results of the two groups. The results of this study are that the use of the Giving Question and Getting Answer (GQGA) model has proven effective in improving students' critical thinking skills. The GQGA model is suitable for implementation at the elementary school level because it is in accordance with the needs of students to learn through interactions involving cognitive and social aspects. With the right approach, this model is able to overcome the limitations of traditional learning methods that do not support the development of students' critical thinking skills.

Keywords: Critical thinking skills; Elementary school students; Giving Question and Getting Answer (GQGA)

Introduction

Critical thinking skills are one of the important skills that students need to develop early on, especially at the elementary school level. These skills include students' abilities in analyzing information, evaluating arguments, making decisions based on facts, and solving problems logically (Anggraeni et al., 2022; Maknun, 2020). In the era of globalization and the industrial revolution 4.0, critical thinking skills are an important foundation for facing the challenges of life in the future (Dudhat, 2023). However, various studies show that the critical thinking skills of elementary school students are still at a level that is classified as not having high critical thinking skills (Pamungkas & Wantoro, 2024). Students tend to be passive, less able to ask in-depth questions, and find it difficult to evaluate information objectively (Widayati & Patmisari, 2024).

One of the factors causing low critical thinking skills is the use of learning models that are less interactive and do not encourage students to be actively involved in the learning process (Almulla & Al-Rahmi, 2023). Traditional teacher-centered learning models often only provide limited space for students to ask questions or discuss in depth (Maknun, 2020). Therefore, innovation is needed in learning models that can facilitate the development of students' critical thinking skills (Sahudra et al., 2021). One learning model that has

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great potential to overcome this problem is Giving Question and Getting Answer (GQGA). The GQGA model is a learning approach designed to actively engage students through the process of asking and answering. In this model, students are encouraged to ask questions based on their understanding of the material that has been studied, and then seek answers to these questions through discussion or interaction with classmates.

This process not only improves students' understanding of the material but also trains their critical thinking skills through analysis, evaluation, and reflection activities (Kemal & Rusmiati, 2024). In addition, the GQGA model can increase students' confidence in expressing ideas, arguing, and receiving input from others (Sabrina & Rachmadtullah, 2024; Sitanggang et al., 2024). Several previous studies have shown that the GQGA model is effective in increasing student engagement during the learning process. Students who are actively involved in learning tend to have a better understanding of the material and are able to think critically (Kusnafizal & Haikal, 2020; Suryana & Yulia, 2021). However, the application of this model has not been widely implemented in the learning curriculum, especially in Indonesia.

This is an opportunity to explore the effectiveness of the GQGA model in improving students' critical thinking skills at various levels and subjects. Although the Giving Question and Getting Answer (GQGA) model has been recognized as an effective learning method in several countries, its application in the context of Indonesian education has been minimally researched. The characteristics of learning culture in Indonesia, such as the dominance of teacher-centered learning, potential gaps in technology access, and students' socio-cultural diversity, have not been widely explored in relation to their impact on the success of implementing the GQGA model in improving students' critical thinking skills (Nopitasari et al., 2024; Yulianti et al., 2019).

Most existing research on the GQGA model tends to focus on specific subjects, such as language and social sciences. Research related to the application of the GQGA model to more structured and analytical subjects, such as science and mathematics, is still limited. In fact, these subjects require high critical thinking skills to analyze problems and find solutions. Most studies only measure one or two dimensions of critical thinking, such as the ability to ask questions or evaluate arguments. Research that examines the effect of the GQGA model on various dimensions of critical thinking, such as the ability to analyze, evaluate, synthesize, and problem solve, is still very limited. This creates a gap in understanding the holistic impact of the application of the GQGA model on students' critical thinking skills.

This study focuses on measuring students' critical thinking skills as a whole, including aspects of students' abilities to draw conclusions, recognize assumptions, evaluate arguments, and make logical decisions (Anugraheni, 2020; Rudd & Baker, 2000). This approach differs from previous studies that often only highlight one particular aspect of critical thinking, thus providing deeper insight into how the GQGA model affects various dimensions of critical thinking skills. This study aims to examine the effectiveness of the Giving Question and Getting Answer model in improving students' critical thinking skills. The results of the study are expected to contribute to the development of innovative learning methods that are relevant to the needs of 21st century learning.

Method

Research Design

This type of research is Quasi Experimental Research. This study was conducted to determine the effect of the GQGA model treatment on students' critical thinking skills. The way to find out is by comparing students' critical thinking skills between the experimental group and the control group. In the experimental group, the learning used the GQGA model. In the control group, the learning used was conventional learning. The research design used a posttest-only control group design which can be described as follows:

R1	X	O2
R2		O3

Figure 1. Research Design category posttest-only control group design

Description:
R1 = experimental class
R2 = control class
X = treatment (application of the GQGA model)
O2 = Students' critical thinking skills after being given treatment
O4 = Students' critical thinking skills without being given treatment

Respondents

The respondents in this study were 30 students of class 4a SDN 1 Pungguk, Cirebon City. The selection of this sample was based on the results of coordination between researchers and teachers because learning problems existed in that class.

Instrument

This study used an instrument that had been developed by Watson and Glaser, commonly known as the Watson-Glaser Critical Thinking Appraisal (WGCTA), one of the standard instruments widely used to assess critical thinking skills. This instrument focuses on students' ability to draw conclusions, recognize assumptions, evaluate arguments, and make logical decisions. Meanwhile, for the implementation of the experiment, the syntax of the Giving Question and Getting Answer (GQGA) model in general is (1) Giving Questions by Students (Giving Questions), At this stage, the teacher asks students to observe certain materials or information, either in the form of readings, videos, or phenomena being studied. Students are then asked to ask questions based on the material.

The questions asked must be relevant and related to the understanding of the concept or problem being discussed. (2) Grouping Questions, The teacher collects questions asked by students and groups them based on their theme or level of complexity. This aims to ensure that all questions can be answered systematically. (3) Finding Answers, Students individually, in pairs, or in groups look for answers to the questions asked. This process can involve group discussions, searching for information through books or the internet, or direct exploration of learning materials. (4) Discussion and Presentation of Answers, After students find the answers, they are asked to present their results to their classmates. At this stage, other students can provide input, clarification, or additional information to enrich the answers. (6) Reflection and Evaluation, The teacher and students reflect on the learning process that has been carried out. The teacher provides feedback on the questions asked, the answers given, and the critical thinking process that occurs during learning. The teacher also evaluates students' understanding of the material and the effectiveness of the GQGA model in learning.

Data Analysis

Data analysis in this study was carried out using a t-test to test the hypothesis regarding the effect of a particular learning model on improving students' abilities. The t-test was used to compare the average results of critical thinking skills between the control group and the experimental group after treatment. Before the t-test was carried out, an assumption test was first carried out, namely a normality test to ensure that the data was normally distributed, and a homogeneity test to ensure equality of variance between groups.

Result and Discussion

The result section is provided before the discussion section. Each section stands alone as a subtitle. The result and discussion should be written in not less than 60% of the entire body of the manuscript.

Result

This study aims to examine the effectiveness of the Giving Question and Getting Answer model in improving students' critical thinking skills. The results of this study are explained as follows:

Table 1. Data Description

Parameters	Critical Thinking Skills
N	30
Minimum	84
Maximum	92
Mean	88.76
Std. Deviation	4.753

Table 1, it can be seen that the valid N is 30 students. The minimum value is 84, the maximum value is 92, the mean value is 88.76, and the standard deviation value is 4.753.

Table 2. Normality Test

Shapiro-Wilk	Critical Thinking Skills	rate	Conclusion
Sig	0.107	0.107>0.05	Normal Distribution

Table 2 above, it can be seen that the results of the normality test of environmental care attitude data have a result of 0.107>0.05, so it can be concluded that the data in this study meets the requirements of the Shapiro-Wilk normality test and the data is stated to be normally distributed.

Table 3. Homogeneity Test

Levene Statistic	df1	df2	Sig.
1.699	1	29	0.116

In table 3 it can be seen that the significance value based on mean 0.116>0.05. So it can be said that the data variance is the same or homogeneous.

Table 4 output "Independent Samples Test" in the "Equal variances assumed" section is known Sig. value (2-tailed) of 0.003 <0.05, then as the basis for decision making in the independent sample t test it can be concluded that H0 is rejected and Ha is accepted. Thus it can be concluded that there is a significant (real) difference between the average critical thinking ability of students in the experimental group and the control

group. So it can be concluded that there is an influence of the GQGA model on the critical thinking ability of elementary school students.

Table 4. Independent Simple t Test

Parameters		Equal variances assumed	Equal variances not assumed
Levene's Test for Equality of Variances	F	1.699	
	Sig	0.16	
t-test for Equality of Means	t	-2.743	-2.723
	Sig. (2-tailed)	0.003	0.006

Discussion

This study shows that the use of the GQGA model consistently results in a significant increase in students' critical thinking skills. The experimental group taught using the GQGA model showed a higher increase in critical thinking scores compared to the control group using the conventional learning model. This is due to the interactive and collaborative nature of GQGA which gives students space to develop ideas, evaluate opinions, and practice critical thinking skills directly (Mardiastuti et al., 2017; Setiawan & Anggraeni, 2019). In addition, the implementation of GQGA also provides additional benefits in increasing student learning motivation (Sasson et al., 2018). The interactions that occur during the question & answer process create an interesting and challenging learning atmosphere, so that students are more motivated to be actively involved. This motivation indirectly strengthens the development of critical thinking skills, because students are encouraged to explore learning materials more deeply (Nurdin, 2019; Siagian & Fau, 2021).

However, the success of this model is highly dependent on the role of the teacher as a facilitator. Teachers need to ensure that the questions asked by students are of high quality and relevant to the learning material. In addition, teachers must also be able to manage discussions so that they remain focused on learning objectives. With the right implementation strategy, the GQGA model can be an effective solution to significantly improve students' critical thinking skills. Critical thinking skills are one of the skills that are the main focus in the world of 21st-century education. Various studies have shown that active learning approaches, such as the Giving Question and Getting Answer (GQGA) model, are effective in developing students' critical thinking skills. According to Ennis (2011), critical thinking involves the ability to analyze, evaluate, and solve problems systematically. In the GQGA model, students are encouraged to be actively involved in the learning process by asking questions and seeking answers collaboratively, which supports the development of these skills (Fantiro et al., 2023).

Previous research by Rahmawati (2018) found that the application of GQGA in learning can increase student participation as well as their critical thinking skills. Students who actively ask questions show a deeper understanding of the subject matter, while improving their analytical and evaluation skills. In addition, Febriyanti et al. (2022) reported that the use of the GQGA model is not only effective in improving critical thinking skills but also strengthens students' confidence in expressing opinions. The GQGA model encourages students to actively ask and answer relevant questions, thereby developing various aspects of critical thinking, such as analysis, evaluation, and synthesis skills. Through this process, students learn to think logically and systematically, and are able to solve problems with the right approach (Yulianti et al., 2020). The use of the GQGA model creates an interactive and interesting learning atmosphere. The process of asking and answering encourages students to participate more actively, thereby increasing their self-confidence and motivation to learn. With a collaborative atmosphere, students feel more involved in the learning process.

Conclusion

The use of the Giving Question and Getting Answer (GQGA) model has proven effective in improving students' critical thinking skills. The results of data analysis showed a significant increase in students' critical thinking skills in the experimental group compared to the control group using conventional learning methods. The GQGA model specifically has a positive impact on various dimensions of critical thinking, such as analytical skills, evaluation, and problem solving. Through the process of asking and answering, students are able to understand learning materials more deeply, evaluate information well, and solve problems logically. In addition to improving critical thinking skills, the GQGA model also makes a positive contribution to students' learning motivation and active participation in learning. The interactive and collaborative learning atmosphere makes students more actively involved, confident, and enthusiastic in participating in learning.

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