

ANALYSIS OF THE EFFECTIVENESS OF IMPLEMENTING THE GUIDED DISCOVERY MODEL IN IMPROVING STUDENTS' CRITICAL THINKING IN LEARNING ACTIVITIES

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Abstrak

Penelitian ini bermaksud untuk menguji bagaimana paradigma eksplorasi terbimbing, bersama dengan hypno-teaching dalam bahan ajar, meningkatkan kemampuan berpikir kritis siswa. Pendekatan kuasi eksperimen merupakan metodologi penelitian yang digunakan dalam penelitian ini. Penelitian ini menggunakan desain nonequivalent control group design sebagai metodologi penelitiannya. Anak-anak di kelas X menjadi populasi penelitian. Siswa kelas A berperan sebagai kelompok eksperimen dan siswa kelas B berperan sebagai kelompok kontrol dalam penelitian ini. Purposive sampling adalah metode pengambilan sampel yang digunakan peneliti. Untuk mengumpulkan data penelitian ini, digunakan tiga metode: tes tertulis, angket, dan pendekatan wawancara. Untuk menemukan jawaban atas pertanyaan penelitian dan memvalidasi hipotesis penelitian, data yang dikumpulkan dengan menggunakan instrumen penelitian kemudian diolah dan dievaluasi. Penggunaan model penemuan terbimbing dengan dukungan hypno-teaching memberikan dampak terhadap kemampuan berpikir kritis siswa, sesuai temuan penelitian dan pembahasan. Hal ini didukung dengan uji hipotesis Mann-Whitney U yang menghasilkan sig (2-tailed) sebesar 0,001 dan kesimpulannya H₀ ditolak. Siswa pada kelompok eksperimen melihat adanya peningkatan kemampuan berpikir kritisnya. Penerapan pendekatan eksplorasi terbimbing dengan hypno-teaching membuahkan hasil yang sangat baik dari para siswa.

Kata kunci: Guided Discovery, Berpikir Kritis, Siswa, Control Group Design

Abstract

This study intends to examine the ways in which the guided exploration paradigm, in conjunction with hypno-teaching in the instructional materials, enhances students' critical thinking abilities. The quasi-experiment approach is the research methodology employed in this study. This study employed a nonequivalent control group design as its research methodology. The kids in class X made up the study's population. Students from class A served as the experimental group and students from class B served as the control group in this study. Purposive sampling is the method of sampling that researchers employ. In order to gather data for this study, three methods were used: written tests, questionnaires, and interview approaches. In order to find answers to research questions and validate research hypotheses, the data collected using research instruments is then processed and evaluated. The use of the guided discovery model with hypno-teaching support has an impact on students' critical thinking abilities, according to the research findings and discussion. This is supported by the Mann-Whitney U hypothesis test, which produced a sig (2-tailed) of 0.001 and the conclusion that H₀ is rejected. Students in the experimental group saw an improvement in their critical thinking abilities. The application of the guided exploration approach with hypno-teaching yielded excellent results from the pupils.

Keywords: Guided Discovery, Critical Thinking, Students, Control Group Design

INTRODUCTION

National Education in the Independent Curriculum aims to shape the character of students, one of which is having the Pancasila Student Profile character with critical reasoning. Pupils who possess strong critical thinking abilities will be able to solve problems in their daily lives because they will be able to think in ways that allow them to comprehend arguments, analyze things effectively, evaluate

problems impartially, and evaluate them appropriately. This suggests that developing critical thinking abilities is crucial for Indonesian pupils. Critical thinking abilities are lacking among Indonesian students (Arikunto, 2015). It is said that Indonesian pupils have poor critical thinking abilities based on earlier study findings. Students' average score on critical thinking skills questions during the learning process was only 35.41%. Less active, application-focused teaching strategies are utilized by educators, which make pupils passive and just transfer knowledge, impeding their development and leading to a lack of critical thinking skills. In the twenty-first century, students will find it challenging to keep up with the quick advances in information and technology (Kamaruddin et al., 2023). Pupils frequently offer haphazard, partial responses and incorrect computations because they are not focused on thinking through and answering critical thinking issues. To help students develop their critical thinking abilities, physics teachers need to design a learning model that may stimulate students to participate actively and pay attention during the course of the lesson (Kamaruddin et al., 2022).

Students can develop their critical thinking skills by using the guided discovery learning methodology, which uses hypno-teaching as a support. It is claimed that the discovery learning paradigm can help students become more adept critical thinkers based on earlier research findings. Through assisting students in recognizing, exploring, evaluating, and creating understanding, this model aims to create active learning strategies. Hypno-teaching can be used in conjunction with the discovery learning methodology to positively impact students' minds. Through internal and exterior mental manipulation, hypno-teaching enhances the effectiveness, enjoyment, and relaxation of the learning process for students (Parinussa et al., 2023). Among the many hypno-teaching methods, the learning process does not require profound hypnosis or even putting the students to sleep; instead, the students are placed in a state of mild trance, or trance. By doing this, students' critical areas are lowered, allowing information to more readily reach the subconscious in the form of content, guidance, or inspiration. This helps students unwind and concentrate while honing their critical thinking abilities. Thus, the hypnotically assisted guided discovery learning methodology can enhance students' critical thinking abilities (Cintia et al., 2018).

Students' problem-solving strategies can be developed using this guided exploration methodology. When using the guided discovery approach of learning, the instructor will give examples, assist you in seeing patterns in these instances, and draw conclusions after pupils are able to articulate the concepts they have learned. Hypno-teaching is an innovative, creative, and imaginative way of teaching in which students are prepared to learn since the learning process starts before the actual learning process (Dahlia et al., 2018). Using this approach, the instructor takes on the role of a hypnotist, but instead of using sedatives to put the class to sleep, they can make suggestions to the students by using persuasive language as a communication tool. The goal of the hypno-teaching approach is to help students become more adept at using critical thinking to actively respond to issues about perception, which will help them become less uncomfortable voicing their thoughts, concentrate on their studies, and foster relationships between friends, teachers, and students (Kurmaeni et al., 2019).

Learning that combines the guided discovery model with the hypno-teaching method can be called the guided discovery model assisted by hypno-teaching. This combination model is a model with a learning process that supports students' critical thinking into an alpha state to focus more on discovering the concepts being studied with the help of direction or instructions from educators. With the aid of hypno-teaching, the guided discovery learning model seeks to stimulate students' critical thinking abilities (Kamaruddin, 2019). Specifically, students are encouraged to actively respond to questions about the perception they are given, engage in discussions and experiments, express their opinions without feeling uncomfortable, and concentrate on learning activities and interactions between teachers and students as if they were friends. To conceive and solve problems through a good thought process, one must possess critical thinking skills. due to the fact that critical thinking highlights the steps and procedures of thought (Cintia et al., 2018). so that students' critical thinking abilities might be applied as a helpful learning process to help them reach their full potential and find solutions to social issues in their surroundings.

METHOD

The quasi-experiment approach is the research methodology employed in this study. The pretest (first test) is administered to two groups: the experimental group and the control group. Subsequently, the experimental and control groups receive different treatments. This type of study design is known

as the nonequivalent control group design. A posttest will be given to both groups at the conclusion of the lesson. Students enrolled in classes made up the study's population. Students from class A served as the experimental group and students from class B served as the control group in this study. Purposive sampling is the method of sampling that researchers employ. In order to gather data for this study, three methods were used: written tests, questionnaires, and interview approaches. To ensure that the test instrument is appropriate for use as a data collection tool, it must be assessed for validity, reliability, distinguishing power, and level of difficulty prior to being administered to experimental and control groups. Instruments that have been validated, tested, and researched will produce research data. The data obtained through research instruments is then processed and analyzed with the aim of answering research questions and testing research hypotheses. But before carrying out a hypothesis test, statistical prerequisite tests must first be carried out, namely normality and homogeneity tests. After that, proceed with hypothesis testing and data analysis from the student response observation sheet. This data analysis uses the help of IBM SPSS.

RESULTS AND DISCUSSION

The first critical thinking abilities of students fall into the low level. Pretest and posttest instruments are used to examine students' critical thinking abilities at both the beginning and end of the process. The experimental group's pretest average was 7.8 out of 50, whereas the control group's pretest average was 8.5 out of 50. There was no discernible difference in the two groups' mean pretest scores when it came to their starting critical thinking abilities. The experimental and control groups received the lowest possible score of two. The experimental group's highest score was 22, whereas the control group's highest score was 24. The experimental group's lowest score was 4 out of 50, while the control group's lowest score was 0 out of 50. Eight out of fifty was a score that both groups frequently had. Both groups' scores fell into the low range as a result of these findings. This is consistent with earlier studies' conclusions that Indonesian pupils struggle with critical thinking. Students who choose learning methods that do not completely support students to actively think critically and who are less focused on thinking through critical thinking issues are the main causes of students' low critical thinking skills. Learning through discussion activities with PowerPoint media is the typical method of implementation, according to the findings of interviews conducted with instructors and students. Pupils have lost their enthusiasm since teachers haven't consistently inspired them.

Based on the outcomes of the pretest for each critical thinking indicator basic support, inference, advanced clarification, strategy and tactics, and elementary clarification students' initial skills fall into the low category. In the experimental group, the elementary clarification indicator was 20%, while in the control group, it was 23%. Students' proficiency with basic clarification signs is low. In the experimental group, the basic support indicator was 16%, while in the control group, it was 15%. Students' proficiency with fundamental support indicators is low. The experimental group's inference indicator was 16%, while the control groups was 17%. indicators of low inference skills among students. In the experimental group, the advanced clarification indication was 17%, while in the control group, it was 21%. Low proficiency with advanced clarification signs among students. The experimental group's strategy and tactics indicator was 9%, whereas the control groups were 10%. inadequate knowledge of tactics and strategy among students.

There are notable disparities between the experimental group's and the control group's critical thinking abilities. The experimental group's average post-test score was 37 out of 50, whereas the control group's average score was 22 out of 50. Thus, it can be said that there was a substantial difference between the two groups' average post-test scores. The lowest score for the experimental group was 30, whereas the lowest score for the control group was 14. The control group's score climbed by 16 (a 16-point difference), whereas the lowest score of the experimental group increased by 24 (a 24-point difference). This score shows that the experimental group's critical thinking abilities increased significantly, while the control group's increases were not statistically significant. The control group's highest score was 41, with a score difference of 11 points from the ideal score, but the highest score for the experimental group was 45, just 9 points off from the ideal score. In the experimental group, the score that showed up most frequently was 41, but in the control group, it was 23.

The experimental group's critical thinking skills indicators showed a significant rise in each, according to the data collected. The N-gain number shows the rise in each indicator. The experimental

group saw the most rise in the elementary clarification indicator, reaching 79% in the high category, while the control group only made it to 36% in the medium level. This is due to the fact that the problem statement's syntax and pacing phases, along with the stimulus, might prompt students to pose and respond to inquiries on the ideas of effort and energy. When compared to other indicators, the basic support indicator in the control group increased the least 17% in the low category and 63% in the medium category for the experimental group. This is because, in contrast to students in the experimental group, who receive instruction using a guided discovery model aided by hypnotically taught syntax for data processing and collection, conventional learning students lack the training necessary to conduct investigations and gather observational data. The n-gain on the basic support indicator is smaller than that of other indicators because of this feature.

Indicators of strategy and tactics rose by 60% in the medium category for the experimental group and by 24% in the low category for the control group. In the high category, the inference indicator rose by 76% in the experimental group and by 38% in the control group in the medium category. In the high category, the experimental group's advanced clarification indicator increased by 78%, whereas in the medium category, the control group's increased by 47%. Every indicator increased more in the experimental group than it did in the control group. This is because the experimental group's students were given both teacher-centered and student-centered learning at the same time, while the control group only used conventional learning that was geared toward teacher-centered learning. As a result, the experimental group's students were more motivated, engaged in active inquiry into the concept of energy business, and more focused on critical thinking. As per earlier research, the guided discovery learning model has the potential to enhance students' critical thinking abilities. It effectively blends teacher-centered and student-centered learning approaches.

The experimental group's students showed a strong interest in learning material using the guided discovery model with hypno-teaching assistance. This is evident from the student questionnaire findings, which are in the strong group (73%), when it comes to the use of the guided discovery model aided by hypno-teaching. The percentage of students' responses to learning using the guided discovery model with hypnoteaching assistance is 79%; the percentage of students' critical thinking abilities following the use of the guided discovery model with hypnoteaching assistance is 67%; and the percentage of students demonstrating excellence in learning with the use of the guided discovery model with hypnoteaching assistance is 71.5%. According to the questionnaire's results, using the guided discovery model with hypnoteaching can help students concentrate and pay attention while they study, comprehend material related to the energy business more easily, become more involved in the learning process, and develop their critical thinking abilities. The posttest statistical hypothesis test findings indicate that H1 is accepted and H0 is rejected. The statistical hypothesis test concludes that there is a difference between the experimental group's and the control group's final average critical thinking score. Students' critical thinking is impacted by the implementation of the guided discovery model with hypnoteaching, as indicated by the increase (N-gain) in each critical thinking indicator. The findings of this study are corroborated by earlier research, which claims that the hypno-teaching approach and the guided discovery model have an impact on students' critical thinking abilities and can be utilized as an alternate strategy to enhance them.

CONCLUSION

The use of the guided discovery model with hypno-teaching has an impact on students' critical thinking abilities in business and energy material, according to the research and discussion results. This is supported by the Mann-Whitney U hypothesis test, which produced a sig (2-tailed) of 0.001 and the conclusion that the hypothesis was rejected. Students in the experimental group saw an improvement in their critical thinking abilities. The application of the guided exploration approach with hypno-teaching yielded excellent results from the pupils. The mean proportion of students' answers when using the guided exploration technique with hypnotized instruction. The researchers have proposed a number of recommendations based on the findings of their research, including the following: The study's findings indicate that hypnotically guided discovery models can help students become more adept at applying critical thinking to business and energy-related topics, making them viable options for use in the classroom. By utilizing additional variables and material coverage in the application of the guided discovery model with hypno-teaching support, other researchers can build on

this work. With the use of media that can further encourage students' critical thinking abilities, the guided discovery model aided by hypno-teaching can be improved even further.

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