

The Influence of Spinning Wheel Media on Students' Critical Thinking Ability in the Basic Science Concepts Course in Class I C PGSD UMSU Medan

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Abstract: This research aims to determine the Spinning Wheel Learning Media on Students' Critical Thinking Ability in the Basic Science Concepts Course in Class I C PGSD UMSU Medan. This research was motivated by looking at the condition of students' understanding of the basics of science learning in elementary schools. The students' lack of knowledge regarding the basics of science learning made researchers interested in conducting this research to see students' critical thinking abilities regarding learning basic science concepts. This research was carried out in September - November 2024. This research is a type of quantitative research using research instruments in the form of tests, namely one group pretest-posttest design, namely experimental research carried out for one group only. This research design was measured using a posttest after treatment was carried out. The results of this hypothesis test show a significance result of 0.000, which is smaller than 0.05. Thus H₀ is rejected and H_a is accepted. Based on the results of this test, it can be concluded that there is an influence of the use of Spinning Wheel media on students' critical thinking abilities in the Basic Science Concepts course.

Keywords: Spinning Wheel, Critical Thinking Ability, Basic Science Concepts Course

Introduction

Education is an element that cannot be separated from human life. This is because education has an important role in shaping human thought patterns, morals and behavior so that they comply with applicable norms. According to Law No. 20 of 2003 concerning the National Education system, education is a conscious and planned effort to create a learning atmosphere and learning process so that students can actively develop their potential, such as religious spiritual strength, self-control, personality, intelligence, noble character and skills. necessary for him.

Effective learning is not only determined by the learning content, but also by the learning model applied and supported by the learning media used in the learning process. By creating a balance between learning materials and selected learning media, learning objectives can be achieved optimally. Thus, it can be concluded that learning is not just an activity carried out by students to gain knowledge, but is also a process that has a specific goal, namely ensuring that the learning process runs smoothly and is able to improve students' critical thinking skills. Critical thinking skills are very important in today's life, where we continuously have to make decisions to determine what actions to take.

Literature Review

Learning is an interactive process where individuals are involved in learning activities with the aim of obtaining new results or knowledge (Maulidina et al., 2023). Learning activities

are part of the education process which provides opportunities for students to improve their abilities in developing the attitudes, knowledge and skills needed to live together in society, as a nation, and contribute to the welfare of life. Learning is not only an effort by students to gain knowledge, but is also a process that aims to ensure that students can improve their critical thinking skills, then there are aspects that must be achieved, namely the smoothness of the learning process (Hatami et al., 2023).

According to Sardiman in (Sari, 2020), essentially learning is wanting to gain knowledge, skills and understanding of mental attitudes and values. In the learning process, lecturers as facilitators or motivators play an important role in the teaching and learning process. Lecturers must be able to create dynamic conditions and be able to improve the quality of learning, for this reason lecturers must be able to choose one learning model that can increase student learning motivation in class.

In general, media is the plural of medium, which means intermediary. (Arsyad, 2017) states that "Media is an introduction or intermediary for messages from the sender to the recipient of the message". This understanding is in line with opinion (Kustandi & Darmawan, 2018) which states that "The term media or medium is an intermediary which conveys information between the source and the recipient." Apart from that, (Kustandi & Darmawan, 2018) stated that "Media is a form of intermediary used by humans to convey or spread ideas, ideas or opinions conveyed to the recipient aim." If the media carries messages or information aimed at learning or supporting learning purposes, then the media is called learning media. In this sense, teachers, textbooks and the school environment are media.

This spinning wheel media is a development of Roulette game is one of the famous games in this world. According to (Riyani, 2019) "roulette originates from French which means little wheel discovered by Blaise Pascal". According to (Wahyuni, 2022) "the wheel of fortune media (spin) is a media in the form of a wheel that can be rotated and divided into several sectors or sections". In accordance This opinion, according to (Selfara et al., 2022) states that the spinning wheel media is a round tool that can move and can go around or around that can used in learning.

According to (Saputra, 2020) critical thinking involves the ability to recognize patterns or relationships between information, analyze complex problems, determine the cause and effect of a situation, make conclusions supported by relevant data, and consider various factors before making a decision or drawing a conclusion Critical thinking skills do not develop by themselves, but require practice through the application of appropriate learning models and media. Therefore, researchers want to apply Spinning Wheel Learning Media to the Basic Science Concepts course in Class I C PGSD with the aim of helping students improve their critical thinking skills. Spinning Wheel media is a tool that can support students in solving problems and learning exercises. Paul Ginnis in (Hasan et al., 2021) describes that this media takes the form of a challenging game, motivating students to be actively involved in solving problems or answering questions displayed on a spinning wheel.

Amelia and Febriansyah (2019) stated that nowadays the learning process that is often used is to focus on lecturers (educators) rather than focusing on students or learners, this has the impact of making learning material boring and considered uninteresting. This also results in the role of students being very small, otherwise students are involved more actively in the learning process so that their achievements in the learning material can be successful, even encouraging and progress in accordance with the dream of education itself.

Nasution & Sitanggang (2024) Learning with a scientific approach is said to be successful if the teacher uses the steps of a scientific approach properly and correctly. For this reason, teachers are required to have talent and be creative in increasing student creativity in teaching and learning activities (KBM); especially science learning so that students do not feel bored and tired of learning. Creativity in question is everything done by teachers and students that can produce a product that is effective and relevant to the learning objectives to be achieved.

Novianti (2015) states that the wheel is spinning is the media on which the operation is played like a wheel. When the wheel is turned and stop at one of the stopping points then the student tasked with carrying out and responding to commands provided.

Critical thinking is a reasonable and reflective thinking process that is grounded and focused in determining what to believe or do (Firdaus & Nisa, 2019). Critical thinking is a systematic thinking activities to analyze and evaluate a problem faced according to their own beliefs and opinions. Critical thinking skills can also take some getting used to people to be able to be rational in determining and selecting the best alternative options for himself. Critical thinking is indeed a difficult thing, but if you practice it continuously, people will those who are unable to think critically will be able to think critically. Therefore, critical thinking skills It is very necessary in the learning process carried out in the classroom and outside the classroom.

Based on the problems described above, researchers chose effective learning media and is suitable for improving students' critical thinking skills in science learning. Instructional Media is anything that can be used to stimulate thoughts, feelings, attention and students' skills, so that they can encourage an active learning process (Luh & Ekayani, 2021). Therefore, the existence of learning media is very necessary in the teaching and learning process The goal is to improve critical thinking skills. Effective media used in science learning is a spinning wheel medium. Spinning wheel is a circle-shaped media that comes in various forms various colors are played by rotating according to the process. This spinning wheel media is made with The aim is to make it easy for students to understand learning and make learning more interesting (Astuti, 2022).

According to Gusdiana and Egok (2020), spinning wheel media can make students think carefully concrete/real about the material being taught. Paul Ginnis (in Khoirunnida, 2022) explains that Spinning wheel media is a media with challenging advantages, which encourages students to participate in solving problems. From this opinion it can be seen that the spinning wheel can support and help the process of improving students' critical thinking skills.

Method

This research uses a quantitative approach, using research instruments in the form of tests, namely one group Pretest-Posttest design, namely experimental research carried out for one group only. This research design was measured using a pretest carried out before treatment and a posttest after treatment. In this way the results of the treatment can be seen accurately. The one group Pretest-Posttest design scheme is shown as follows:

Tabel 1. Skema One Group Pretes-Posttest Design.

Pre-test	Treatment	Post-test
T ¹	X	T ²

This research was carried out in Class I C PGSD FKIP UMSU, with a sample size of 30 people. The data collection technique used was a test carried out to be able to test and understand the learning process using Spinning Wheel media which was given as a treatment to class I C PGSD FKIP UMSU students, as well as the results of student responses when using Spinning Wheel media regarding their critical thinking abilities.

Result and Discussion

A. Result

1. Validity

Validity testing is carried out using the Product Moment formula which is processed using SPSS 22 software with the condition that if $r_{count} > r_{table}$ at $(\alpha = 0.05)$ with $n = 20$ then the instrument is considered valid and if $r_{count} < r_{table}$ then the instrument is considered invalid. The results of testing the validity of the questions are presented in the table below:

Tabel 2. Uji Validitas Instrumen

Item	Rtabel	Rhitung	Keterangan
Ke-1	0,444	0,592	Valid
Ke-2	0,444	0,402	Invalid
Ke-3	0,444	0,657	Valid
Ke-4	0,444	0,579	Valid
Ke-5	0,444	0,520	Valid
Ke-6	0,444	0,631	Valid
Ke-7	0,444	0,663	Valid
Ke-8	0,444	0,339	Invalid
Ke-9	0,444	0,263	Invalid
Ke-10	0,444	0,332	Invalid
Ke-11	0,444	0,551	Valid
Ke-12	0,444	0,629	Valid
Ke-13	0,444	0,583	Valid
Ke-14	0,444	0,635	Valid
Ke-15	0,444	0,551	Valid
Ke-16	0,444	0,542	Valid
Ke-17	0,444	0,617	Valid
Ke-18	0,444	0,624	Valid
Ke-19	0,444	0,441	Invalid
Ke-20	0,444	0,591	Valid

Based on the table calculations above, it is known that the r_{count} for all question items is greater than the r_{table} , namely 0.444. Therefore, of the 20 questions above, 15 were declared valid and 5 questions were declared invalid.

2. Reliability

Reliability testing was carried out using the Cronbach Alpha formula in the SPSS 22 program. Reliability testing was carried out by looking at the Cronbach Alpha column in the Reliability Statistics table. The Cronbach Alpha column is a column in the Reliability Statistics table which shows whether the instrument is declared reliable or not, provided that the Cronbach Alpha value is < 0.60 then the test instrument is declared unreliable.

Tabel 3. Hasil Uji Reliabilitas

Variabel	Cronbach Alpha	N of Item
Media <i>Spinning Wheel</i> Kemampuan Berpikir Kritis IPA	0,839	15

Based on the table above, it is known that each item studied is declared reliable because it has a Cronbach Alpha value greater than 0.60 (Cronbach Alpha >0.60).

3.Hypothesis

Hypothesis testing in this research was carried out to see the significant influence of each independent variable, namely the Pre Test before using the Spinning Wheel (X1) media on the (dependent) variable, namely the Post Test after using the Spinning Wheel (Y). So the criteria are if the calculated r value is > r table and the significance value is < 0.05 then H0 is rejected, thus Ha is accepted and vice versa if the calculated r value is < r table and the significance value is > 0.05 then H0 is accepted and thus Ha is rejected.

From the data obtained, the sig value can be stated. is 0.000, which means it is smaller than 0.05, so it can be concluded that there is an influence of the use of Spinning wheel media on students' Critical Thinking Ability in basic science concepts courses in class I C PGSD UMSU.

B. Discussion

After carrying out a Validity Test to determine the validity of the questions, and the researcher carried out a Reliability Test, and found that there were only 15 valid and reliable questions out of a total of 20 questions, then the researcher carried out a Hypothesis Test to see the significant influence of each independent variable.) namely the Pre Test before using the Spinning Wheel (X1) media on the (dependent) variable, namely the Post Test after using the Spinning Wheel (Y). From the data above you can see the sig value. is 0.000, which means it is smaller than 0.05, so it can be concluded that there is an influence of the use of Spinning wheel media on students' Critical Thinking Ability in basic science concepts courses in class I C PGSD UMSU.

Conclusion

A. Conclusion

In this research it can be concluded that there is an influence of the use of Spinning wheel media on students' Critical Thinking Ability in basic science concepts courses in class I C PGSD UMSU. This can be seen from the t test results which show a significance result of 0.000 which is smaller than 0.05. Thus Ho is rejected and Ha is accepted. This means that there is an influence of the use of Spinning Wheel media (X1) on students' critical thinking abilities (Y) in the Basic Science Concepts class I C PGSD FKIP UMSU course.

B. Suggestion

In this research, researchers hope that learning will always be implemented using the help of interactive media such as spinning wheel media, because it will help students in the learning process. Spinning Wheel media is a media in the form of a wheel that can be rotated and divided into several sectors or parts, with a mechanism for its use. The Media Spinning Wheel will move along its axis and stop at one of the images in it. The learning that takes place will be meaningful so that it will be able and influential in improving students' critical thinking abilities.

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