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# The Influence of The Monopoly-Assisted PAKEM Model on Students' Critical Thinking Skill in Elementary School

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**Abstract**

This study aims to examine the effect of the monopoly-assisted PAKEM model (Active, effective, creative, effective and fun learning model) on the critical thinking skills of grade 5 students of SD Negeri Demaan. Research using quantitative methods with experimental research types. The experimental design form used Quasi Experimental Design with the form of Nonequivalent Control Group Design. The study involved two groups: an experimental class and a control class. The subjects in this study were grade 5 Demaan state elementary school which amounted to 45 students. Data collection is in the form of a description type test of 10 questions given for pretest and posttest. The data analysis techniques used are normality, homogeneity and hypothesis test consisting of Independent sample t-test and Paired sample t test. Before carrying out the data collection process, conducting instrument trials first consists of validity, reliability, differentiation and difficulty tests. The average pretest result of the control class was 40.83 and the posttest was 40.95 While the average experimental class pretest results obtained were 44.06 and posttest obtained 80.63. The paired sample t test of the experimental class obtained results in the lower column of -41.90 upper of -31.23 and the significance value (2-tailed) = 0.000 < 0.05 then $H_o$ was rejected and $H_a$ was accepted that there was a significant effect of using the monopoly-assisted PAKEM model on the critical thinking ability of grade 5 students of Demaan state elementary school. Therefore, educators or teachers can apply the Monopoly-assisted PAKEM model to improve students' critical thinking.

**Keywords:** PAKEM Model, Monopoly, Critical Thinking Skill.

***Abstrak***

*Penelitian ini bertujuan untuk menguji pengaruh model PAKEM berbantuan monopoli terhadap kemampuan berpikir kritis siswa kelas 5 Sekolah Dasar Negeri Demaan. Penelitian menggunakan metode kuantitatif dengan jenis penelitian eksperimen. Bentuk deesign eksperimen yang digunakan Quasi Experimental Design dengan bentuk Nonequivalent Control Group Design. Penelitian melibatkan dua kelompok yaitu kelas eksperimen yang diberikan perlakuan model PAKEM berbantuan monopoli dan kelas kontrol yang diberikan perlakuan model konvensional. Subyek pada penelitian ini yaitu kelas 5 Sekolah Dasar Negeri Demaan yang berjumlah 45 siswa. Teknik Pengambilan data berbentuk tes jenis uraian sejumlah 10 soal yang diberikan untuk pretest dan posttest. Teknik analisis data yang digunakan adalah normalitas, homogenitas dan uji hipotesis yang terdiri dari Uji Independent sample t test dan Paired sample t test. Sebelum melakukan proses pengambilan data, melakukan uji coba instrumen terlebih dahulu terdiri dari uji validitas, reabilitas, daya beda dan tingkat kesukaran. Rata-rata hasil pretest kelas kontrol 40,83 dan posttest sebesar 40,95. Sedangkan rata-rata hasil pretes kelas eksperimen yang didapatkan sebesar*



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*44,06 dan posttest diperoleh 80,63. Uji paired sample t test kelas eksperimen memperoleh hasil pada kolom lower -41,90 upper sebesar -31,23 dan nilai signifikansi (2-tailed)= 0,000 < 0,05 maka Ho ditolak dan Hα diterima terdapat pengaruh yang signifikan penggunaan model PAKEM berbantuan monopoli terhadap kemampuan berpikir kritis siswa kelas 5 Sekolah Dasar Negeri Demaan. Maka dari itu pendidik atau guru dapat menerapkan model PAKEM berbantuan Monopoli untuk meningkatkan berpikir kritis siswa.*

***Kata Kunci:*** *Model PAKEM, Monopoli, Kemampuan berpikir kritis.*

## INTRODUCTION

Every human being has the opportunity to learn to improve the quality of life through education. Education is an action to provide knowledge information or receive knowledge from others (Sukma et al., 2022). Education is a conscious effort through the learning process with various learning experiences in all environments and situations to develop the potential of knowledge, attitudes and skills (Pristiwanti et al., 2022). Education as the spearhead in the progress of the nation and national development must be improved to create human resources that have high competitiveness (Prasetya et al., 2023). Education in Indonesia is currently facing the development of the 21st century in order to be competitive by having the necessary skills in this 21st century era. One of the government's efforts in responding to the demands of the needs of the 21st century era by making curriculum changes in accordance with the times is by implementing the "Freedom of Learning" curriculum which was initiated directly by Nadim Nakarim as Minister of the Ministry of Education and Culture of the Republic of Indonesia. The learning process in the independent curriculum leads to the needs of students (student-center) (Indarta et al., 2022).

The Merdeka Curriculum frees teachers to create educational and fun learning that can foster 21st century skills. In the 21st century learning process, teachers become facilitators to encourage students to be active, collaborate and build knowledge through project activities, discussions or group work (Nopiani et al., 2023). Teachers must use varied and innovative models, methods and media so that students are not bored and active and can shape the skills needed by students in this 21st century (Puspitarini, 2022). In facing the development of the 21st century requires 21 skills that every student who is known as 4C must master. These abilities and skills should be applied in 21st century learning because today requires creative people to adapt quickly (Putriani & Hudaidah, 2021). One of the skills that students need to master today is Critical Thinking. Critical thinking is an important ability to be developed and needed in this democratic life (Ismiyanti & Permatasari, 2021). But in reality, the condition of students' critical thinking skills in Indonesia is still low. Based on the results of the program for International student assessment (PISA) test, Indonesia is in position 72 out of 77 countries with a score of 379 (Nicomse & Girsang, 2022).

Based on the results of observations and interviews with grade 5 homeroom teachers of Demaan state elementary school, said that the learning process has not used innovative models and media. The learning process is teacher-centered so that students are not directly involved in the learning process. Teachers always only use conventional models, the methods used are still only lectures, questions and answers and assignments and learning is not accompanied by the use of innovative media so that students feel bored and students tend to be passive. The teacher only always explains, students only listen and pay attention, lack of interaction and communication between teachers and other friends In addition, the critical thinking skills of grade 5 students are still low. In the learning process students still have difficulty in critical thinking, logical thinking, and analyzing. This is conveyed directly by the homeroom teacher and in accordance with the condition of students when students do questions with a high cognitive level which usually contains a problem, students feel difficult and confused in solving the problem. Especially in the form of stories where students have to analyze the problem to solve it, students do not know what to do first, students do not understand the problem and if the problem is related to counting, they only focus on the numbers. Teachers do not make it a habit to give practice questions with cognitive levels C4-C6. In developing

critical thinking skills, students must be familiarized or trained to do problems based on cognitive levels C4 to C6 (Apriyana et al., 2019). It can be proven by the results of the Mid-Semester I Summative Assessment (STS) of mathematics subjects. Because of all STS scores, the lowest in mathematics scores and all students get low scores below KKM. In math problems that the description cannot solve because they do not understand the problem in the description so that the description problem gets a low score.

Based on the above problems, the author found a solution, namely teachers must choose innovative models and media then applied in the learning process to be able to build student enthusiasm in the learning process, make students become active and hone critical thinking skills. One of the learning models that can be applied by teachers is the active, creative, effective and fun learning model commonly abbreviated as the PAKEM model (Active, effective, creative, effective and fun learning model). The PAKEM model is a learning model that can be used to foster students' critical thinking skills. The PAKEM model is a process of learning activities in which teachers must create a learning atmosphere that students are interested in so that students actively ask questions, question and express their ideas. PAKEM is a form of student-centered learning and learning is fun, so that students do not feel afraid of subjects (Sangadji & Marasabessy, 2021). According to Ary W et al., deep (Laksmi et al., 2020), One solution for students is because it can encourage students to be able to develop creativity in students and can make students not feel afraid to express opinions in class.

In the learning process, media is also needed as a tool for the learning process to be effective and efficient. Learning using media will become clearer so that students can understand and master the teaching given by the teacher, can foster motivation, attract students' attention and students interact more and move during learning activities (Yulina Ismiyanti, et al). Media or teaching aids that students are interested in in the form of games. So students can learn while playing until students feel happy and not afraid of lessons. Monopoly is a board-shaped game, where players compete how to play how to roll dice in turn and move according to the number of dice obtained (Umayah & Harmanto, 2019). Monopoly media can realize cognitive, psychomotor and affective aspects (Mulyawati & Gani, 2019). Monopoly as a learning medium that encourages students to be more active, innovative, creative, effective and fun in order to get optimal results (Kurniawati, 2021). Monopoly is one of the games that can be used as a learning medium. Not only learning but also while playing. Through monopoly students have memorable experiences and learnings such as working together to solve problems presented by teachers, being responsible and respecting each other's opinions (Adilah & Minsih, 2022).

Based on research conducted previously by (Maslahah et al., 2022) entitled active, creative, effective and fun learning model (PAKEM) with interactive media: impact on understanding mathematical concepts. It was found that learning using the PAKEM model assisted by interactive learning media affected students' mathematical concept skills. Previous research was also conducted by (Manurung & Halim, 2021) with the title the influence of the PAKEM learning model on the mathematics learning achievement of grade V students of SDN Pondok Kelapa 05 Pagi Jakarta, which found that the PAKEM Model approach was one of the efforts that could be used to improve mathematics achievement. Results of research conducted by (Sipayung, 2023) berjudul The influence of the PAKEM learning model on the ability to write students' explanatory texts, which states that the use of the PAKEM model has a significant effect on the ability to write explanatory texts for grade VIII students of SMP Negeri 1 Delitua for the 2022/2023 school year. Other research conducted by (Mendrofa & Lahagu, 2023) Titled application of pakem learning model to improve learning outcomes of grade VIII students in SMP Negeri 2 Tuhemberua academic year 2022/2023 it can be concluded that the PAKEM learning model can improve student learning outcomes at SMP Ngeri 2 Tuhemberua for the 2022/2023 academic year. Other research conducted by (Pradnyawathi & Agustika, 2019) The Tri Hita Karana-based PAKEM model has a significant effect on the writing skills of grade IV students of Gugus Letkol Demaan state elementary school. Denpasar for the



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2017/2018 academic year.

What this study has in common with previous research is testing the PAKEM model against other capabilities. The method used from the previous research is the same as this study, namely quantitative methods with experimental types. The data collection technique is also the same, namely using tests. This research with previous research has differences including research subjects, forms of data collection tests, and also research objectives. Previous research has shown that applying the PAKEM model can be influential in the learning process, but no previous research has examined the PAKEM model on critical thinking skills with the help of monopoly media. This is the first to examine the monopoly-assisted PAKEM model on critical thinking skills. Therefore, the authors conducted a study entitled "The Effect of Monopoly-Assisted PAKEM Model on Critical Thinking Skills in Primary Schools". Based on the statements described above, the author conducted a study that aimed to examine the effect of monopoly-assisted active, creative, effective and fun learning models on the critical thinking skills of grade V students of Demaan state elementary school.

## RESEARCH METHOD

The method used in this study is quantitative method. A quantitative approach is used to prove by using numbers in statistical analysis to solve research problems (Sihotang, 2023). The type of research used experimental research. Experimental research is research to try to find a causal relationship between independent variables and dependent variables that aims to find out a phenomenon, symptom or influence arising from certain treatments (Abraham & Supriyati, 2022). The form of experimental design used in this study is Quasi Experimental Design in the form of Nonequivalent Control Group Design. The design in this study involved two groups, namely experimental and control classes. The experimental group was treated using the monopoly-assisted PAKEM model, while the control group used conventional methods. The subjects in this study were grade 5 students of Demaan state elementary school totaling 45 students consisting of class 5A as many as 24 students and class 5B as many as 21 students.

Data collection techniques in the form of tests in the form of essays with a total of 10 questions. Test instruments are arranged based on a grid of test question sheets with indicators of critical thinking skills and with cognitive levels C4-C6. The test is used to obtain data on students' critical thinking skills. The tests were given for a pretest and then treated to the experimental group using the monopoly-assisted PAKEM model while the control group used the conventional learning model. After that, the test is given for the final test (posttest). Before carrying out the data collection process, to test the question items first by conducting instrument trials and must analyze the results to determine validity, reliability, difference and level of difficulty. After that, take data with pretest and posttest. Then the results are calculated using initial data analysis tests including normality tests and homogeneity tests followed by final data analysis tests including normality tests, homogeneity tests, and hypothesis tests, namely independent sample t tests and paired sample t tests.

## RESULT AND DISCUSSION

This research is a type of experimental research that aims to examine the effect of the monopoly-assisted model PAKEM on the critical thinking skills of grade 5 students of Demaan state elementary school. Before the data collection process in this study, the author tested the research instrument that will be used for pretest and posttest questions. The research instrument used is in the form of 10 essay test questions. The trial of this question instrument was carried out at Muhajirin Islam elementary school in the 5A class with a total of 27 students. The purpose of testing the instrument is to determine the validity, reliability, differentiation and level of difficulty in the pretest and posttest questions that will be used in this study.

Based on the results of the instrument trials that have been obtained, the results of the validity test calculations that have been carried out state that all 10 questions tested have valid categories. The results of the reliability test on the questions that have been tested obtained results of 0.93 with a very

high category. In the calculation of different power tests from 10 questions, the results obtained have different categories. Questions that have good categories are 4 questions, enough categories are 6 questions. The difficulty test results of the 10 questions also obtained results with different categories. There are 2 questions that have an easy category, 4 questions in the medium category and 4 questions in the difficult category.

The next step is for researchers to conduct research and data collection. The sample in this study was grade 5 Demaan state elementary school of Jepara consisting of 5A totaling 24 students and class 5B totaling 21 students. This study involved two groups consisting of an experimental class and a control class. Class 5A is an experimental class treated with the monopoly-assisted PAKEM model, while the control class is treated with a conventional learning model.

Before carrying out learning or treatment in each class, researchers give pretests first to students to determine students' critical thinking skills before being given treatment. After being given a pretest, the next step is to carry out the learning process by applying treatment to each class. The experimental class was treated with a monopoly-assisted PAKEM model and the control class applied the conventional learning model and then gave a posttest to determine the students' critical thinking skills after being treated in each class.

**Table 1.** Hasil Pretest dan Posttest

| No | Kelas | Jumlah Siswa | Hasil | Nilai | | |
|---|---|---|---|---|---|---|
| | | | | Maksimal | Minimal | Rata-rata |
| 1 | Eksperimen | **24** | Pretest | 60.00 | 20.00 | 44.06 |
| | | | Posttest | 95.00 | 62.50 | 80.63 |
| 2 | Kontrol | **21** | Pretest | 55.00 | 12.50 | 40.83 |
| | | | Posttest | 55.00 | 15.00 | 40.95 |

Based on the results of the pretest and posttest that have been carried out in both groups, it can be seen in the table above that in the experimental class there was a significant improvement after being given treatment. The average pretest results of the experimental class before treatment were obtained at 44.06 and the average posttest results after being given monopoly-assisted PAKEM model treatment obtained results of 80.63. In the control class, the average pretest result before treatment was obtained at 40.83. Then, after the control class was given the conventional learning model treatment, an average of 40.95 was obtained. It can be concluded that using the monopoly-assisted PAKEM model there is an improvement in students' critical thinking skills.

In the initial data analysis, researchers conducted normality tests and homogeneity tests of initial data (pretest) from the experimental group and control group. The results obtained from the initial data normality test (pretest) experimental class obtained a significance value of 0.353 > 0.05 and the normality test results from the control pretest obtained a significance value of 0.078 > 0.05. Both normality test results from both classes show a significance value of >0.05, so the initial data from the two classes can be inferred as normally distributed data. While the results of the homogeneity test of the initial data (pretest) of the experimental class and control class obtained a significance value in the Based on Mean column which showed a significance value (sig) = 0.920 > 0.05 which means that the initial data of the experimental and control classes have homogeneous variance.

In the final data analysis, researchers conducted normality tests, homogeneity tests and hypothesis tests consisting of independent sample t tests and paired sample t tests. The data tested are the final data (posttest) from the experimental and control classes. Based on the results of the final data normality test (posttest), the experimental class obtained a significance value (sig) = 0.212 > 0.05 and the results of the final data normality test (posttest). The control class obtained a significance value

(sig) = 0.082 > 0.05. Both normality test results from both classes showed a significance value



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(sig) of >0.05. So the final data (posttest) of the two classes can be inferred normally distributed data. While the results of the homogeneity test of the final data (posttest) of the experimental class and control class obtained a significance value in the Based on Mean column which showed a significance value (sig) = 0.848>0.05 which means that the final data (posttest) of the experimental and control classes had homogeneous variance.

In the calculation of the independent sample t test, the data tested are preliminary data (pretest) carried out before treatment is given in experimental and control classes and final data (posttest) carried out after giving treatment in experimental and control classes.

There are hypotheses used by researchers in this study, namely

H o= There was no significant difference between the critical thinking skills of experimental and control class students.

H a = There is a significant difference between the critical thinking skills of experimental and control class students.

The following independent sample t test criteria are as follows: significance value (2-tailed)> 0.05 is H o accepted and H a rejected, which means that there is no significant difference between the critical thinking skills of experimental and control class students. If H a the significance value (2-tailed) < 0.05 then H o is rejected and H a accepted, which means that there is a significant difference between the critical thinking skills of experimental and control class students.

The results of the independent sample t test on the initial data (pretest) of the experimental and control classes before being given treatment, can be observed in the Equal Variance Assumed line which obtained a significance value (2-tailed) = 0.293 > 0.05 then H o accepted and H a rejected which mean that there is no significant difference between the critical thinking skills of experimental and control class students.

After both classes were treated, researchers calculated the independent sample t test on the final data (posttest) of the experimental and control classes. The results obtained in the Equal Variance Assumed line shows a significance value (2-tailed) = 0.000 < 0.05 are H o rejected and H a accepted, which means there is a significant difference between the critical thinking skills of experimental and control class students.

Paired sample t test to determine the difference in research results that have been carried out with different treatments through differences in pretest and posttest results between experimental and control groups.

There are hypotheses that can be used in this study, namely:

H o= There was no significant average difference in students' critical thinking skills before and after treatment

H a= There was a significant average difference in students' critical thinking skills before and after treatment.

The following criteria for the t-test (paired sample t test) are as follows: significance value (2-tailed) > 0.05 is H o accepted and H a. rejected, which means that there is no significant average difference in students' critical thinking skills before and after treatment. If the significance value (2-tailed) < 0.05 then H o it is rejected and H a accepted, which means that there is a significant average difference in students' critical thinking skills before and after treatment

Paired sample t test to determine the difference in research results that have been carried out with different treatments through differences in pretest and posttest results between experimental and control groups. Based on the table presented above, the paired sample t test results in the control class, can be seen in the Lower column obtained negative of -0.79000 and Upper obtained positive of 0.55190 and obtained a significance value (2-tailed) = 0.715 > 0.05 then H o accepted and H a rejected, which means that there is no significant average difference in students' critical thinking

skills before and after treatment.

**Table 2.** Hasil *Uji paired sample t test* Kelas Kontrol

**Paired Samples Test**

| | | Paired Differences | | | | | t | Df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | PreTest Kontrol - PostTest Kontrol | -.11905 | 1.47398 | .32165 | -.79000 | .55190 | -.370 | 20 | .715 |

In the table of Paired sample t test results in the experimental class, it can be observed in the Lower and Upper columns that both have negative values, namely Lower of -41.89842 and Upper of -31.22658 and obtain a significance value (2-tailed) = 0.000 means a significance value (2-tailed) = 0.000<0.05 then H o rejected and accepted, there was a significant difference in students' critical thinking skills before and after treatment,H a namely the monopoly-assisted PAKEM model. This means that there is a significant effect of using the monopoly-assisted PAKEM model on critical thinking skill.

**Table 3.** Hasil *Uji paired sample t test* Kelas Eksperimen

**Paired Samples Test**

| | | Paired Differences | | | | | T | Df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | PreTest Eksperimen - PostTest eksperimen | -36.56250 | 12.63648 | 2.57941 | -41.89842 | -31.22658 | -14.175 | 23 | .000 |

So, the conclusion from the paired sample t test results is that in the experimental class there was an effect of using the monopoly-assisted PAKEM model on critical thinking skills, while in the control class there was no influence using conventional learning models.



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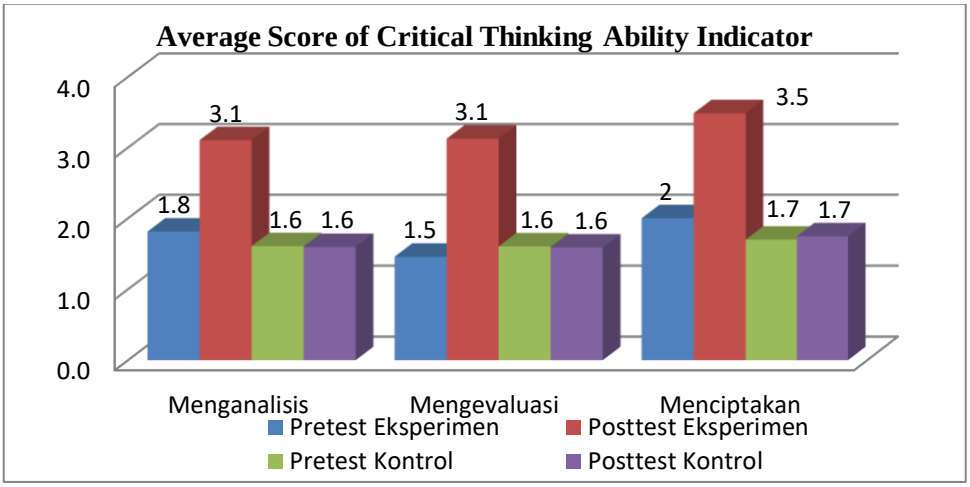


**Figure 1.** Average score from the Critical Thinking Ability Indicator

Based on the average score table of indicators analyzing critical thinking skills are found in questions number 4, 6, 7 and 10. The average result of the analytical ability indicator from the experimental class pretest score was obtained 1.8 and the control class pretest was obtained 1.6. Meanwhile, the experimental posttest score was obtained 3.1 and the control posttest was 1.6. Therefore, it can be concluded that in the experimental class using the monopoly-assisted PAKEM model, there was an increase in indicators of analyzing critical thinking skills compared to the control class using the conventional model, there was no increase in indicators of analyzing critical thinking skills. These results are in line with research (Lestari et al., 2019) which states that the analyzing indicator there was a significant increase of 34.87%. On research (Nida Winarti et al., 2022) It also states that an indicator that affects critical thinking skills is an indicator of analysis because it has increased significantly. The research is in line with this research that there has been a significant increase in the analyzing indicators.

Indicators of ability to evaluate are found in questions number 2, 8, and 9. The average result of the indicaator score of the ability to evaluate from the experimental class pretest score was obtained 1.5 and the control class pretest was obtained 1.6. Meanwhile, the experimental posttest score was obtained 3.1 and the control posttest was 1.6. Therefore, it can be concluded that in the experimental class using the monopoly-assisted PAKEM model, there was an increase in indicators evaluating critical thinking skills compared to the control class using the conventional model, there was no increase in indicators evaluating critical thinking skills. On research (Mutiara Havina Putri, Fahmi, 2021) states that the indicator evaluates well because it has an upward trend in some groups. Research (Kusmianty et al., 2020) Obtaining the results of the evaluation indicator increased from 26% to 83% in the high category. Research from (Febrianti et al., 2021) also obtained the results of indicators evaluating critical thinking skills there was an increase. The study is in line with this research that there is a significant increase in evaluation indicators.

Indicators of the ability to create are found in questions number 1, 3, and 5. The average score result of the indicator of the ability to create an experimental class pretest was obtained 2 and the control class pretest was obtained 1.7. While from the experimental posttest score obtained 3.5 and posttest control 1.7. Therefore, it can be concluded that in the experimental class using the monopoly-assisted PAKEM model, there was an increase in indicators of creating critical thinking skills compared to the control class using the conventional model, there was no increase in indicators of creating critical thinking skills. In line with research (Hasanah et al., 2021), The highest improvement occurred in the aspect of creating. According to (Sukmawijaya et al., 2019), Creating indicators are indicators of shaping students to find new opinions or ideas. The indicator of creating undergoes changes and increases in height. The study is in line with this research that there is a significant increase in the indicators it creates.

**Figure 2.** Monopoly-assisted PAKEM Model Treatment

The use of the monopoly-assisted PAKEM model affects critical thinking skills. In line with (Anggriasari et al., 2020), the success of learning using the monopoly-assisted PAKEM model is characterized by a well-developed learning process. During the learning process students were very excited because researchers delivered learning using LCD Projectors with ppt and learning videos, they were learning to use LCD projectors for the first time. The atmosphere during the learning process becomes interactive, active, and students are not sleepy or bored. Students are very focused when the researcher explains the material. Students also find it easier to understand the material. Then when using monopoly learning media, it becomes more attractive to students and students become even more eager to learn. Because this medium is collaborated with games. So, students learn with pleasure and are not saturated or bored, even students become more active. Monopoly learning media also teaches students to be honest, hard work, sportsmanship, and responsibility in completing according to what is in the media because it is there (Adilah & Minsih, 2022). The material is presented in the form of questions, commands, and challenges. Games are carried out in groups, so it can encourage students to have a social spirit and communication between students.

Learning under the monopoly-assisted PAKEM model is a new experience for students. With this model, students carry out various activities so as to encourage students to interact and communicate between students and with teachers and can grow student skills. Interaction can affect understanding to encourage students' critical thinking skills, especially during the learning process (Dadri et al., 2019). A conducive and active learning atmosphere can also increase student passion in the teaching and learning process so that they can concentrate on solving existing problems. This is in line with opinion (Ismiyanti & Afandi, 2022) which states interaction in the learning process can realize ideal education. Menurut (Damung et al., 2019), Good classroom management can be characterized by the interaction between educators and students and the formation of student motivation to always be active in class. According to (Wibowo et al., 2022), The interaction between teachers and students has an important influence on the development of critical thinking skills. Through teacher activities, giving students the freedom to ask questions and provide guidance to students in understanding the lessons delivered, teachers can encourage students to be able to solve problems in the subject matter delivered.

The selection of innovative models and media to be applied in learning can support the learning process to build student enthusiasm, encourage students to practice skills, encourage students to be active and comfortable so as to make students focus and be able to understand the learning that takes place. This is in line with the opinion of (Azizah & Fitrianawati, 2020) that the learning process by applying appropriate media and models can help students understand learning material. The application of models and media can realize interesting and fun learning has an impact on improving



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learning outcomes. Opinions from (WH et al., 2023) It also explains that the use of media, teaching aids, technology or other additional resources can increase the appeal of learning and make it easier for students to understand concepts better. According to (Zakiyah et al., 2022), The learning process with the help of learning media can make the learning process more lively, meaningful and interesting. Because of the learning process, it should create a learning atmosphere with interesting learning resources and methods. Nuraida (2019), states that the application of innovative models and media in the learning process can make it easier for students to understand the subject matter delivered by the teacher, can improve and train students' critical thinking skills in learning so that they can achieve the expected learning goals and can improve students' critical thinking skills.

This research is also in line with constructivism theory states that knowledge is obtained from shaping students in the learning process through interaction with new materials or experiences (Nurfatimah, 2019). The theory of constructivism is in line with this research, because in this study students gain knowledge through interaction with new materials or experiences, namely with the monopoly-assisted PAKEM learning model that has never been applied before. Learning strategies applied to constructivism theory are active learning, independent learning, cooperative learning and everything else (Suparlan, 2019). In accordance with Vygotsky's theory, learning is a development of understanding obtained from everyday experience and at school. The concept of Vygotsky implies the importance of student activeness in the learning process. Vygotsky's theory emphasizes the social interaction of each individual in a learning environment (Suardipa, 2020).

Different from experimental class learning, the control class was given conventional learning model treatment. Researchers only deliver material by lecture method. The learning process in the control classroom is centered on the teacher, the researcher dominates more in activities. Students tend to be passive and only listen during the learning process. Often students do not understand what the teacher conveys, making students less understanding of the material taught, students do not ask questions when they do not understand what the researcher conveys. Therefore, students have low or less optimal students' critical thinking skills in solving existing problems or problems. This is in line with research (Liska et al., 2021), Conventional learning is carried out with lectures without facilities for various ways of learning so that critical thinking skills obtained using conventional learning methods are less than optimal. In line with research from (Yulianto et al., 2023), Low critical thinking skills in students are caused by lack of critical thinking practice because during learning using teacher-centered learning and conventional methods with lectures, students tend to be passive, less involved during the learning process and students rarely issue opinion or ideas.

Based on the research that has been done, students' critical thinking skills improved after being treated using the PAKEM model. This means that there is a significant effect on the use of the monopoly-assisted PAKEM model on the critical thinking skills of grade 5 students of Demaan state elementary school. In this study, the monopoly-assisted PAKEM model was able to effectively shape critical thinking skills, in line with research from (Anggriasari et al., 2020) that the monopoly-assisted PAKEM model can improve learning outcomes and can also shape critical thinking effectively. Based on research that has been carried out using the PAKEM model assisted by monopoly, the results can form critical thinking skills effectively through various learning process activities, namely using power points and also learning videos, then in the power point and video explain the material and there are practice questions where students are asked to solve these problems to encourage students' critical thinking skills. Then the researcher provides problems that must be solved by students in order to form students' critical thinking skills with work done in the form of groups. Each group seeks information through interviews with their classmates to find data in the form of shoe sizes, ideals, favorite foods and so on. Then collect the results of the interview by compiling data and grouping them according to categories in the form of picture diagrams according to their understanding, then make conclusions. After that, each group showed and presented the results orally in front of the class.

In addition, in encouraging students' critical thinking, researchers use monopoly media, because in the monopoly box there are questions with C4-C6 indicators that students must work on

individually to encourage students' critical thinking. In addition, the use of monopoly can provide experience, encourage creativity, and interact directly with other students (Syalfifi et al., 2019). Through this learning process, it can form and improve critical thinking effectively which can be proven in figure 1 the average score of each indicator of critical thinking ability has increased significantly. According to (Rafikasari et al., 2021), also argued that the PAKEM Model is very effective in learning. Learning activities created in a fun way can create an effective learning process so that it encourages students to have more motivation to learn on their own without being ordered and not feeling afraid and forced to follow the learning process. This is in accordance with the research that has been carried out which states that the PAKEM model is very effective because the class completeness value is 96.5%, so it can be stated that the class completeness value has reached a minimum of 75%. Wijayanti (2022) also stated that the PAKEM model is very effective because it is in accordance with the research that has been carried out which is characterized by a positive influence on the learning ability of students who go through the learning process with the PAKEM model.

## CONCLUSION

The use of the monopoly-assisted PAKEM model has resulted in research showing a significant effect on students' critical thinking skills. This is evidenced by the average value of the experimental class of 80.63 and the control class of 40.95 and the results of hypothesis test data, namely the paired sample t test experimental class which obtained results in the lower and upper columns, both of which were negative values of -41.89842 and -31.22658 for the value of sig. ( 2-tailed) : 0.000 < 0.05. The results show that H $o$ it is rejected and H $a$ accepted. Therefore, it is concluded that the use of the monopoly-assisted PAKEM model affects the critical thinking skills of grade 5 students of Demaan state elementary school. Therefore, the researchers advise primary school teachers or educators to apply the monopoly-assisted PAKEM model to improve critical thinking skills.

The limitation of this study is the ability to think critically with indicators C4-C6 consisting of analyzing, evaluating, and creating. In the results of the research that has been obtained, the average critical thinking ability after using the PAKEM model has improved significantly, but among the three indicators namely the ability to analyze, the ability to evaluate and the ability to create, the highest average is the ability to create while the average score of the indicator analyzing and evaluating is obtained with results below the indicator of creating or arguably from the three indicators The lowest is the ability to analyze and evaluate because both have the same average. Therefore, if educators or teachers want to hone and improve their critical thinking skills optimally, it is advisable to use the monopoly-assisted PAKEM model and it is recommended to conduct further research to improve the results of this research to make it even better.

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