



Problem-Based Learning Models (Pbl) Educational Monopoly Board Game Media Helps Student Learning Outcomes at Uptd Sd Negeri 28 Parepare

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ARTICLE INFO

Keywords: Problem Based Learning (PBL), Monopoly Board Game, Learning Outcomes

Received : 27, April

Revised : 20, May

Accepted: 8, June

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ABSTRACT

Study this aim for understand impact paradigm learning based problem-solving (PBL) using game board educational Monopoly on results Students' science learning at UPTD SD Negeri 28 Parepare. Research this based on the results Indonesian students who participated in Assessment Program Study International Students (PISA). Study this use approach quantitative with design experiment *Quasi-Experimental Design* type *Non-Equivalent Pretest-Posttest Control Group Design*. Population study totaling 394 students. Research sample consists of of 59 students, namely 29 students class IV.1 as group experiment and 30 students class IV.2 as group control. Taking technique sample use *purposive sampling*, with determination class based on consideration technical implementation research. Data collection was carried out through test results learning provided before treatment (*pretest*) and after treatment (*posttest*). Statistics descriptive and inferential statistics were used in data analysis. Analysis results descriptive from that results average learning of students in the class experiment is 85.34, which is more tall compared to results average class learning control amounting to 75.33. The results of the analysis using the Independent Sample t-Test show that there is difference significant in results Study between second group with t - value around 2,000 degrees freedom (df) is about 57, and significance around 0.000 (< 0.05). Based on results research, can concluded that application of learning models *Problem Based Learning* (PBL) assisted by *board game* media monopoly educative influential positive and significant to results Students studying science at UPTD SD Negeri 28 Parepare.

INTRODUCTION

Education is means main for the Indonesian nation in effort increase quality source Power humans. According to Aditya, et al., (2024) improvement quality source Power man is the target of every nation in respond challenges of the times, and paths main For make it happen is through education . According to Daniyati, et al., (2023) basically, the world of education always driven by two parties, namely teachers and students. In class, teacher on duty form quality teaching with transfer knowledge, instilling values characters, as well as hone skills students. However, the success of this process also depends on the activeness of student That Alone in learn, because in the end, control on results study is in the hands of each student.

Education at school base consists of from a number of eye lessons, one of them is eye science lessons. According to Sultan in Anwar, et al., (2022) argues that essence from true science learning (IPA) integrate four dimensions each other related. Dimensions first is attitude, which focuses on developing a sense of curiosity know student to phenomenon nature and relationships causality to trigger thinking systematic critical dimension second in the form of a process, which prioritizes method scientific as instrument solution problem. Third, the dimension products that represent understanding deep on empirical data, principles, theories, and laws of science. Finally, the dimensions applications that emphasize capabilities implement the theory and methodology of science in reality life daily.

Science learning materials that have coverage broad, broad in nature complex and difficult for understood cause eye lesson this often considered challenge and become source complaints among students, so that for realize matter said, the teacher has very important role. According to Andini, et al ., (2024) that teachers are the most determining component and holder role important in the learning process teaching . Teachers are expected can build connection familiar with students, encourage participation active, and using method varied learning for avoid boredom. Because the teacher will face to face direct with students and in hand teacher will creation atmosphere fun learning.

Realize conducive, active and enjoyable learning need use of learning models assisted by media that plays a role in increase results Study students, because results Study become indicator important for evaluate level success student during follow the learning process. This in line with opinion Lindaswari in Fitri, et al., (2023) that learning outcomes is form change real in aspects knowledge, attitudes, skills, understanding, and appreciation individual after through the learning process. Changes this in a way systematic known as realm cognitive , affective , and psychomotor . Andryannisa, et al., (2023) also argue that that results Study is achievements achieved student in a way academic through exams and assignments, activity ask and answer supporting questions acquisition results Study.

In line with opinion previously that results Study is performance academic achievements through exams, assignments, and activity student in learning, achievement can also be seen through assessment international such as PISA. Based on OECD (*Organization for Economic Co-operation and Development*)

data (2023), the average score of students' ability Indonesian students still is below the OECD country average, so show that Indonesian students' scientific literacy is classified as low and not yet reach established standards. In the 2022 PISA for science, Indonesia's score was 383, while the world average was 484. Ministry of Education and Culture in Wahyudi, et al ., (2023) state that results Study students in Indonesia in general general Still classified as low. This is seen from the 2023 Indonesian Education Report report shows that percentage students who achieve minimum competency in literacy (which includes ability understand and use knowledge including science) only around 61.53% in elementary school, 59% in middle school, and 49.26% in high school/vocational school, meaning still Lots students who have not reach ability study expected basis. This data show the need improving the learning process for increase results Study student.

Based on data from UPTD SD Negeri 28 Parepare in class IV.1, it was obtained information that results study students in the eye science lessons, especially natural sciences, are still not optimal. This is seen from achievements mark evaluation mid- semester (PTS) odd semester Academic Year 2025/2026, where the average grade student class IV.1 only reached 68, still be under criteria minimum completion (KKM) that has been determined school namely 75. Of the 29 students, 13 students (44.83%) have reach completion, while 16 students (55.17%) have not reach the KKM. The data obtained from document PTS scores held by class teachers (School Documents, 2025).

The low results Study the show that the learning process that has been going on this implemented not yet fully capable help student understand draft optimally. Learning Still tend teacher -centered, less involving student in a way active, and not yet utilize learning models that encourage interaction and engagement student in the learning process.

For answer existing problems, studies literature carried out to find optimization strategies results Study students. Intervention in the form of a learning model known can fix obstacle Study through innovation and stages syntax. One that is considered very worthy in a way pedagogical for overcome situation this and improve achievements student is a learning model Based Problem (*Problem-Based Learning*). According to Ahmad (2024) the PBL (*Problem-Based Learning*) learning model is a model that can be used accommodate student for build critical thinking through solution problem in a way collaboration group. More continued Berkah SY & T. Handayani, (2024) stated that *the problem-based learning* model is a learning model student - centered that can made into as alternative for increase results Study students. Therefore that, teachers in the learning process should using the *problem-based learning* model, because learning become more active.

A number of study previously has do study related implementation of learning models *problem-based learning* (PBL). Research conducted by Husna (2023) concluded that the PBL learning model is considered effective and efficient in develop aspect cognitive students. This model capable arouse curiosity know and improve motivation learn, so that can influential to results Study student.

In addition to implementing the learning model that must be appropriate, other steps can be taken taken by the teacher, namely use of media that is capable interesting attention students and improve interest they in learn, so that material taught more easy understood. Of the many types of learning media, *board game media* monopoly educative capable give effort in facilitate learning solution problem in increase results study. According to Aisah (2024) *Board game* or game board is one of the instruments that can integrated as a learning medium to stimulate at a time increase motivation as well as interest Study participant educate . Next according to Ningtyas (2023) that use *board game* Alone as a learning medium felt more effective rather than Study with explanation. This is caused by Because game capable serve fun and interactive learning.

In context education, games board has proven as very useful tool for teach various concepts and skills. Games board give opportunity for player For Study in a way direct through experience. This means that the player can understand draft such as science, logic, and skills social through interaction with games and with player others (Wibawanto, 2024). One of them example *board game* is game monopoly which is game a board that can played two to eight players, in its implementation as a learning medium, game this can combined with experiment simple that allows child for study through experience directly (Sihotang, 2022).

Development educational Monopoly *board game* can become the right solution Because use learning based game directly, so that student can understand material with a better way pleasant and interactive. This is in accordance with the theory put forward by Khotimah, et al., (2024) that approach game in learning can increase motivation Study students, creating atmosphere fun learning, and encouraging involvement active student in the learning process. According to Darwin, et al., (2024) emphasizes that learning based game can increase results shopping students, as well as create experience interactive learning.

LITERATURE REVIEW

Problem-Based Learning (PBL) Learning Model

System good learning in class can help student understand material with more deep as well as develop ability think they. According to Najakh (2020) As a student- centered learning model , *Problem - Based Learning (PBL)* confronts participant educate on challenges reality life For completed . In the process, concentration learning focused on the search solution in a way independently by students, starting from stage analysis until invention answer. Meanwhile that, the teacher acts as facilitator who provides guidance and direction without dominate the learning process. According to Israwaty, et al., (2023) stated that that through the PBL model, students faced with a situation challenging learning so that push they for active collaborate in increase ability solve problem. Students are also required skilled in integrate as well as analyze data for find valid solution.

Setyo, et al., (2020) opinion that characteristics from the PBL model, namely: (1) learning process in PBL more focus student for develop his knowledge alone, (2) the problem given is authentic situations until capable understood, (3) students try look for source study in a way independent, (4)

implemented in a way collaboration, and (5) teachers have role as facilitator and monitor activity student.

The PBL model has designed steps for make it easier its application in class. The syntax of the PBL model proposed by Pramatha & Parwati, (2025) that: (1) Orientation students on the problem, (2) Organizing students, (3) Guiding student in a way individual and group, (4) Develop and present results work, and (5) Analyzing & evaluating the problem solving process problem.

Learning Media

According to Ilmi & Reskiyanti, (2021) learning media is equipment in the form of designed physical in a way arranged for convey information. According to Ramadani, et al., (2023) learning media is means delivery message learning, namely through how teachers act as giver information, in matter this teacher must use various appropriate media. According to Nurrita (2018) Realization of learning targets in a way efficient and effective can accelerated through utilization instrument help teaching . The tool optimize clarity delivery material, so that message educative can absorbed student with more good.

According to review from Arditya in Tri & I Ketut, (2022) types of learning media shared become four part namely: (1) audio media which is a medium in form presentation voice like radio or recording sound; (2) visual media is media that is related to with function eye like describe various related images with material; (3) audio-visual media is media that combines between element sound and picture in One unity such as learning videos; (4) and multimedia is a media that allows involving all senses man like model three dimensions.

Board Games in Learning

Game board or often called *board game* is form games that use board as the main area for play. Game this involving use various component such as tokens, dice, cards, or movable pawns or operated based on rule certain. In particular general, games board allows interaction between player, good in a way competitive and cooperative, which enriches experience playing (Wibawanto, 2024).

One of effort for jack up enthusiasm Study students in class is with integrate game board *games* as a learning medium. Through approach play while study this activity academic become more interactive and engaging for students. This term originate from language English "*board*", meaning "board", and "*game*", meaning "game" where the pieces game placed, moved, or move on top surface that has been shared or marked with rules. *Board game* is type games that can played in groups and played on flat areas (Aisah, et al., 2024).

Board game is games that involve a number of objects placed and exchanged based on the rules on a surface in form board. There is six type *board game* that is *Strategy Board game*, *German Style Board game*, *Race Game*, *Roll and Move Game*, *Trivia Game*, *Word Game* . (Darmo, et al., 2022) .

Monopoly

Monopoly game is one of the example *board game* game a board that can played two to eight players, in its implementation as a learning medium. Game

monopoly is a learning medium innovative modified , played more of two people with emphasis on mastery the materials that will be delivered (Sihotang, 2022) .

Monopoly in learning is something method or learning media based adapted game from classic Monopoly game. Game this modified to fit with objective educational, where the material lesson inserted to in rule game so that student can Study with a better way interactive and fun. Monopoly in learning used for increase understanding concept, motivation students, as well as increase results learning and strategy. With existence element competition and challenges, students become more active in understand material taught (Anggraini & Permana, 2024)

Science and Social Studies Learning (IPAS)

The subject of science is abbreviation from knowledge knowledge natural and social, a eye lessons that combine science and social studies, and are implemented in curriculum independence. According to Arruum & Desstya, (2024) eye Science lessons in elementary school are foundation beginning for student For understand concepts base knowledge knowledge. Science learning is very important for taught Because with science learning will give convenience for student in understand all related matters with existing natural and social around they. According to Alfatonah, et al., (2023) knowledge knowledge natural and social (IPAS) is discipline science that focuses on understanding about living creatures and inanimate objects in nature universe this, also the interaction between they. This also involves studies about life individual man as creature social, with combine various other compiled knowledge in a way logical and structured, including analysis cause and effect.

Learning Outcomes

According to Andryannisa, et al., (2023) that learning outcomes is achievements achieved student in a way academic through exams and assignments , activity ask and answer supporting questions acquisition results Study mentioned . Learning outcomes student refers to the abilities, knowledge, skills, and understanding acquired by students as results from the learning process. This includes to what extent students reach objective learning determined by the curriculum or educational programs certain. According to Lindaswari in Fitri, et al., (2023) that results Study is change skills and abilities, attitudes, understanding, knowledge, and appreciation, which are known with term cognitive, affective, and psychomotor through the learning process.

According to Faslia, (2021) that results study somebody influenced by various factors that are general can grouped into two, namely factor from outside self students and factors from in self students.

1. Factors from outside self students, who are divided into two groups:
 - a. social factors, namely all something outside individuals who are physical and environmental, such as Condition Air, Weather, Time, Place study (location and conditions) building, Availability tool help appropriate learning.
 - b. Social factors, namely influence from fellow human beings, both those present in a way direct and no directly. The presence of other people at the

time somebody currently Study can give disturbance or distraction in the learning process.

2. Factors from in self students, who are also divided into two groups:
 - a. Physiological factors, namely condition physique individual. A healthy and fit body will impact positive in the learning process.
 - b. Psychological factors, namely condition psychological someone, like motivation, interest, attention, emotions, and anxiety, to name a few influential to effectiveness study.

According to Lestari (2024) indicator results Study based on Bloom's taxonomy includes three realm , namely realm cognitive domain affective and domain psychomotor . Third realm the describe changes that occur in oneself student after follow the learning process.

Theoretical Framework

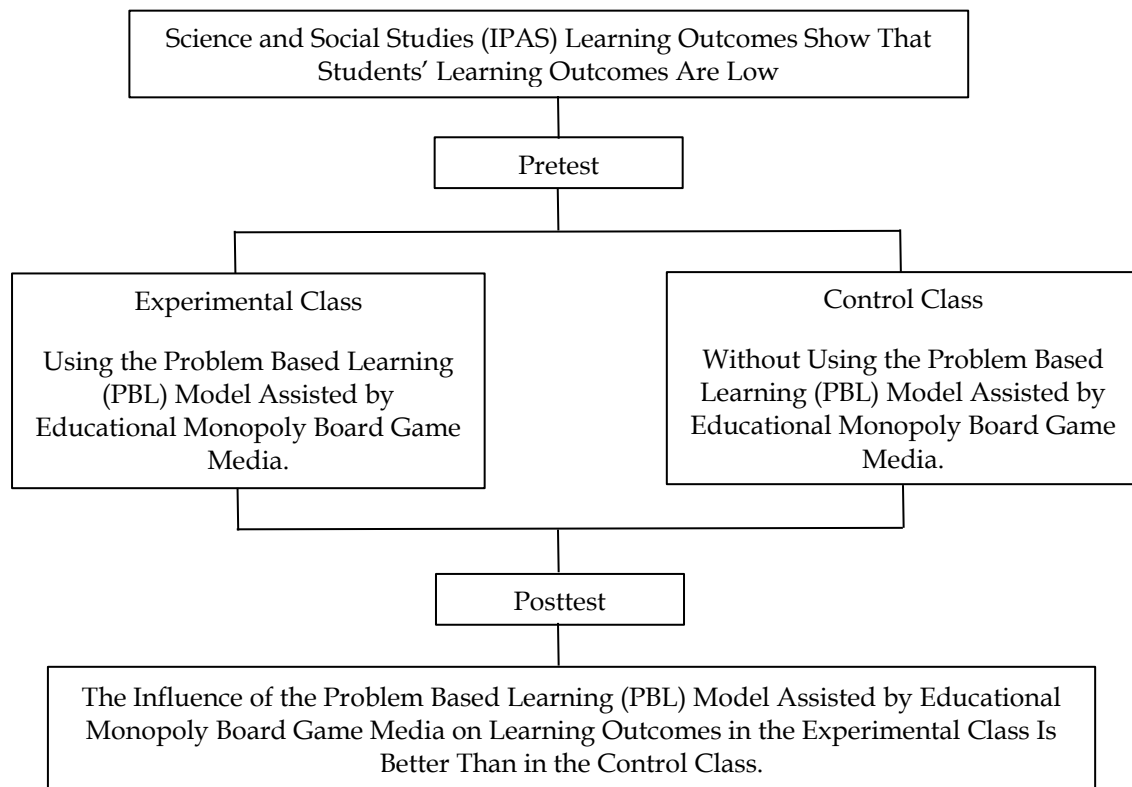


Figure 1. Conceptual Framework

METHODOLOGY

Research Design and Procedure

Study this use approach quantitative. According to Creswell in Jauza & Albina, (2025) study quantitative used For test theory through measurement variables that are carried out with instrument special. The results of measurement this processed with procedure statistics for test truth hypothesis that has been formulated previously.

Experimental method chosen as design implemented research in study this. According to Sugiyono, (2021) the experimental method is basically is clump directed research for test impact/relationship causality something intervention

specific to other variables below manipulated and monitored situations in a way strict.

Research design interpreted as plan integrated implemented for give clear direction in test hypothesis as well as find answer on question research. Researchers use design study *quasy experimental design* with type *Non-Equivalent Pretest- Posttest Control Group Design*. According to Thomas (2024) *quasi-experimental design* aim test connection cause and effect like *experiments*, but No use *random assignment*, group formed based on criteria non-random or groups that have There is previously. Statement this in line with use groups that have available for compared to.

With the inclusion of pretests and posttests in both groups, the researcher can analyze changes in learning outcomes more objectively. The research design can be seen as follows:

Table 1 Research Design Quasy Experimental Design with Type Non-Equivalent Pretest- Posttest Control Group Design

Class	Pretest	Treatment	Posttest
E	O ₁	X	O ₂
K	O ₃	-	O ₄

Source: Dapitra et al., (2022)

Information:

E : Group sample 1 (Class *Experiment*)

K : Group sample 2 (Class *Control*)

O₁ : *Pretest* (Class *Experiment*)

O₂ : *Posttest* (Class *Experiment*)

O₃ : *Pretest* (Class *Control*)

O₄ : *Posttest* (Class *Control*)

X : *Treatment* with using the PBL model assisted by *board game* media monopoly educative

Population and Sample

Population is overall the object that becomes subject research and have characteristics certain. According to Hernaeny (2021) stated that that population is the total of all over groups whose data will analyzed in the research. Based on opinions that have been explain that population is overall something the group that will taken as subject and show characteristics certain in a designated area for studied in research. Population or subjects in the research this is all over students of UPTD SD Negeri 28 Parepare.

Determination sample in studies this depend on approach *non-probability sampling* with apply method *purposive sampling* as a selection strategy. According to Sugiyono (2019) *purposive sampling* is technique in take sample study based on consideration certain. Referring to theories scientific that has presented, *purposive sampling* set as technique determination sample in study this. Election subject the based on a number of criteria specifically in class IV UPTD SDN 28 Parepare, including: level level similar class, similarity teaching materials covered, quantity participant proportional education, equality in ability beginning, and practicality in implementation procedure experiment.

Determination group experiments and groups control done with consider factor readiness operational class, synchronization schedule and stability situation learning in the field. Through consideration ripe of that, class IV.I (29 students) was determined as class experiments, while class IV.II (30 students) acted as class control.

Instrument

According to Iba & Aditya, (2023) technique research data collection is method or the method used for gather required information in A studies or research data collection techniques in study implemented through a number of method, namely tests, observations, interviews, studies case, observation participants, secondary data collection, and experiments.

Study implemented during 6 meetings. At the beginning meeting, researcher give *pretest* in the form of question test (optional double) to see description beginning results Study students, at the meeting second until fourth is give treatment to two groups sample research, class experiments and classes control. Next in the meeting sixth or at the time treatment has given, researcher return give question test (optional double) as *posttest* in order to see description end results Study student.

Data Analysis

Research data processing this shared to in two stages analysis statistics: (1) statistics functional descriptive for summarize raw data, and (2) statistics inferential intended for interesting conclusion general. According to Sugiyono (2021) stated that that data analysis is a processing process information after the data is collected from respondents research. Data processing in the study based quantitative depend on combination between approach statistics descriptive and statistical inferential as instrument the analysis.

Statistics descriptive used for describe activity data Study student through mean, median, mode, range, standard deviation, variance, and classification scale assessment. Meanwhile that, statistics inferential used for test hypothesis about the influence of the game-based learning model with moreover formerly conducted prerequisite tests, namely the normality test (Shapiro-Wilk) and the homogeneity test (Levene's Test) using SPSS version 26. Next, the test hypothesis done using Independent Samples T-Test at the level significance of 0.05, with criteria that If mark significance (sig) ≤ 0.05 then H_0 is rejected and H_1 is accepted whereas If $\text{sig} > 0.05$ then H_0 is accepted.

RESEARCH RESULT

Experimental Class

The baseline data regarding the academic performance of the experimental group in the IPAS course were processed via SPSS software and are illustrated below.

Table 2 Statistical Results Descriptive Class *Pretest* Experiment

Statistics	Statistical Value
Number of Samples	29
Average (Mean)	57.41
Median	60
Mode	60
Maximum	70
Minimum	40
Range	30
Standard Deviation	8.52
Variants	72.54

Acquisition mark *pretest* participant educate in groups experiment furthermore classified refers to the level achievements Study them. As for the division classification based on indicators results Study the explained through the table below this.

Table 3 Distribution Frequency of Learning Outcomes Student Class Experiment Before Treatment

Number	Letter	Amount Student	Category
80-100	A	0	Very well
66-79	B	4	Good
56-65	C	11	Enough
40-55	D	14	Not enough
≤ 39	E	0	Fail

Based on the results of the diagram presented in the image above, can know that score results Study students with a score of ≤ 39 with category fail numbering 0 people, in numbers 40-55 with category not enough totaling 14 people, at numbers 56-65 with category Enough totaling 11, while the numbers 66-79 with category good totaling 4, as well as numbers 81-100 with category Good very show No there is students who meet the requirements category the.

Table 4 Statistical Results Descriptive *Posttest* Class Experiment

Statistics	Statistical Value
Number of Samples	29
Average (Mean)	85.34
Median	85
Mode	85
Maximum	95
Minimum	70
Range	25
Standard Deviation	6.93
Variants	48.09

Performance score end from class experiments are also separated based on criteria results Study students. Details regarding grouping achievements the loaded in a way complete in table following.

**Table 5 Distribution Frequency of Learning Outcomes Student Class
Experiment After Treatment**

Number	Letter	Amount Student	Category
80-100	A	25	Very well
66-79	B	4	Good
56-65	C	0	Enough
40-55	D	0	Not enough
0-39	E	0	Fail

Based on the data in the table above, it can be known that results Study student divided in a number of number with different categories. At numbers ≤ 39 with criteria fail No there is students. At 40–55 with category not enough either there is students. Next, at numbers 56–65 with category Enough No there is students. At numbers 66–79 with category Good there are 4 students, while in the 80-100 figures with category Good very There are 25 students. With thus, it can concluded that part big student is in the category Good once, so that in a way general results Study student classified as very good.

Control Class

The initial data on the learning outcomes of the control class in the IPAS subject were analyzed using SPSS and are presented as follows.

Table 6 Statistical Results Descriptive *Pretest* Class Control

Statistics	Statistical Value
Number of Samples	30
Average (Mean)	57.33
Median	57.50
Mode	55
Maximum	70
Minimum	40
Range	30
Standard Deviation	8.38
Variants	70.23

Pretest score from class controls are also separated based on level success Study students. Details regarding distribution amount participant educate in each category achievements the loaded in table following.

Table 7 Distribution frequency of learning outcomes Student Class Control Before Treatment

Number	Letter	Amount Student	Category
80-100	A	0	Very well
66-79	B	4	Good
56-65	C	11	Enough
40-55	D	15	Not enough
0-39	E	0	Fail

Based on the results of the diagram presented in the image above, can know that score results Study students in the 40-55 age group with category not enough totaling 15 people, at numbers 56-65 with category enough totaling 11, in numbers 66-79 with category good totaling 4, while the number ≤ 39 with category failed, and at 81-100 with category good very show no there is students who meet the requirements category the.

Table 8 Statistical Results Descriptive *Posttest* Class Control

Statistics	Statistical Value
Number of Samples	30
Average (Mean)	75.33
Median	75
Mode	75
Maximum	85
Minimum	60
Range	25
Standard Deviation	6.81
Variants	46.44

Final score participant educate in groups control furthermore classified to in category achievements Study certain. Distribution data the in a way details listed in the table below this.

Table 9 Distribution Frequency of Learning Outcomes Student Class Control After Treatment

Number	Letter	Amount Student	Category
80-100	A	12	Very well
66-79	B	14	Good
56-65	C	4	Enough
40-55	D	0	Not enough
0-39	E	0	Fail

Based on the data in the image above, it is known that that results study student divided to in a number of range mark with different categories. In numbers value ≤ 39 with category fail No there is students. In numbers value 40-55 with category not enough either there is students. Next, in the numbers value 56-65 with category Enough There are 4 students. In the number value 66-79 with category Good there are 14 students, while the number value 80-100 with

category good very There are 12 students. With thus, it can concluded that part big student is in the category good, so in a way general results study student classified as good.

Difference results Study student Grade IV at UPTD SD Negeri 28 Parepare before get action and its aftermath, which is measured through comparison score beginning and end, presented in the following diagram form.

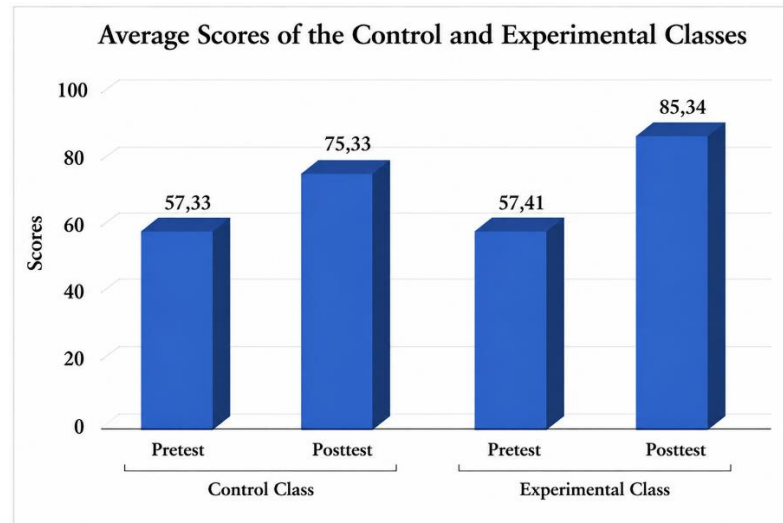


Figure 2 Diagram of Average Pretest and Posttest Scores Class Control and Experiment

Based on the diagram presented in Figure 2, it can be known that existence average difference in results Study student between condition beginning and end of both class. Class experiment experience quite an improvement significant from 57.41 increased to 85.34. Meanwhile class control experience improvement from 57.33 to 75.33. This result indicate that treatment in class experiment give impact more significant to results Study student.

Differences in Student Learning Activities

		<i>Levene's Test for Equality of Variances</i>		<i>t-test for Equality of Means</i>						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Standard Error Difference	95% Confidence Interval of the Difference	
MARK	Equal variances assumed	,029	,866	5,593	57	,000	10,011	1,790	6,427	13,596
	Equal variances not assumed			5,591	56,846	,000	10,011	1,791	6,426	13,597

Figures. 3 Independent Sample T-Test

Referring to the visualization the output of the *Independent Samples T-Test* show number significance (2-tailed) as big as 0,000. This probability value is below the established significance threshold, namely 0,05. According to Ghazali (2018), if the significance value is less than 0.05, there is a significant difference between the two groups being compared. Findings this strengthened by the acquisition mark t_{hitung} of 5.593, which indicates a significant difference in average learning achievement between the experimental and control groups. This score gap is

emphasized by the *Mean Difference value*. of 10,011, which proves that average results Study students in class experiment outperform class control.

Through results testing statistics this, it looks clear that there is difference results significant learning between group students who are taught with *the Problem Based Learning* (PBL) model based on the Educational Monopoly Board Game media compared to with students in class control. In line with view Sugiyono (2021), if number significance be under level of 0.05, then H_0 rejected and H_1 accepted. Based on these provisions, it can be concluded that the implementation of *the Problem Based Learning* (PBL) model assisted by the Educational Monopoly Board Game media give significant influence to improvement results Study students at UPTD SD Negeri 28 Parepare.

DISCUSSION

Implementation of *the problem-based learning* (PBL) model assisted by *board game* media monopoly educational also shows the advantage in class IV.1 is that it becomes class Experiment at UPTD SD Negeri 28 Parepare. Students do solution problem based on orientation given problem through Work The same groups, collaboration, and discussion. In addition, the use of *board game* media monopoly educative become supporters learning in increase motivation and interest Study students. When given problem before learning started, students looks enthusiastic and more easy get required information for finish problem through feature games, cards questions and challenges available on the media. Conditions the impact positive to results Study student Because participant educate more active involved in the learning process. This is in line with Husna's opinion (2023) concludes that the PBL learning model is effective and efficient in develop aspect cognitive student as well as increase motivation learning. In addition, Nurhayani, et al., (2024) stated that that learning media interactive capable stimulate interest Study student so that increase desire know to material studied.

Activity instructional in groups control implemented through approach conventional, where delivery material dominated by methods lecture as well as large -scale discussions limited. In session this, participants educate requested finish questions exercise in a way grouped below teacher's instructions. Although there is room for exchange mind, dynamics interaction between students no as active as possible group an experiment that integrates the PBL model with *board game* media monopoly educational. As a result, participants educate in class control show trend passive moment facing problem stimuli, as well as minimal initiative for submit question or put forward argument.

Based on analysis descriptive, can observed that average value obtained class experiment after given treatment more tall compared to with class average grade control. In simple, thing this indicate that results study students in class experiment tend more good compared to with class control.

Testing hypothesis through statistics inferential started with fulfillment of prerequisite tests analysis in the form of normality and homogeneity tests. The second result testing this state that the data is normally distributed and homogeneous, which means the data meets the requirements condition for analyzed at the stage next. Through hypothesis testing *Independent Samples T-*

Test, obtained index significance (2-tailed) worth 0,000. A smaller number than 0,05 this indicates rejection of H_0 and acceptance of H_1 , so the independent variable is stated to have an effect on the dependent variable. This indication of influence is also proven by a comparison t_{hitung} with 5,593 > 2,000. t_{tabel} Based on the entire series of tests, it can be concluded that there is a significant difference in learning outcomes between classes that implement the *Problem-Based Learning* (PBL) model assisted by board games. monopoly educative with classes that implement learning conventional.

Research result this validate a number of research previously about effectiveness of teaching models and interactive media. Regarding the PBL model, Husna (2023) identified that approach this success trigger internal motivation and desire know students, so that impact significant in the cognitive domain they. Impact empirical this in line with conclusions drawn by Paramita et al., (2025) on the Indonesian language material, Berkah and Handayani (2024) on the field of science studies, as well as affirmation from Muslim et al., (2024). From the perspective of media perspective, use variation game board get support scientific from Anwar and Faisal (2022), who noted existence improvement understanding and involvement active student thanks to the media monopoly. The importance of presence of supporting media this was also emphasized by Hakim (2020) in order to achieve external more optimal learning. Finally, Rahmawati (2023) also participated strengthen argumentation the through data that proves that the game media monopoly educative effective become catalyst in raise achievements study student.

CONCLUSIONS AND RECOMMENDATIONS

Series results analysis in studies this prove the effectiveness of the *Problem-Based Learning* (PBL) model assisted by game media monopoly educative in escalate external academic participant educate in a way significant compared to with ability beginning they. Through interactive approach, this model success activate room discussion, collaboration groups, and sharpness analysis problems among students. On the other hand, although the teaching model conventional participate give contribution to the increase results learning, its effectiveness No as progressive as possible classes that utilize PBL and board games. Therefore that, can concluded that intervention through the PBL based model monopoly educative this hold far- reaching influence more strong in increase performance Study student rather than method conventional.

Focus on process and results testing field, teachers are expected can implementing the *Problem-Based Learning* (PBL) model board game monopoly educational. Utilization combination this projected capable designing activity more instructional alluring at a time spur escalation results Study student in a way significant.

Advanced Research

Researchers furthermore expected can replicate studies this with implementing *the Problem-Based Learning* (PBL) model and *board game media* monopoly educational in the segment class and clump different sciences. Opportunities research future is also open wide for utilise methodology or innovative media others to obtain development data results learn more dynamic and maximum.

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