



The Effect of the Application of Outbound Games Learning Methods on the Problem-Solving Ability of Children Aged 5-6 Years Aisyiyah Bustanul Athfal Bulurokeng Kindergarten: A Quasi-Experimental Study

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ABSTRACT:

This research is based on the problem of low problem-solving skills in early childhood, where children have difficulty thinking, understanding, and remembering and solving problems on their own. According to Weikart, exploration and problem-solving are an active way for children to learn, which is considered important to help children become independent, make decisions, and be confident in dealing with new situations with problem-solving. So this study aims to analyze the effect of the application of the outbound games learning method on the problem-solving ability of children aged 5-6 years. This study uses a quantitative approach with a quasi-experimental method with a post-test design of one group. The research subjects consisted of 15 children at Aisyiyah Bustanul Athfal Bulurokeng Kindergarten Group B who were selected from the research population using saturated sampling techniques. Data is collected through observational guidelines that measure three main aspects: recognizing problems, finding solutions, and evaluating outcomes. The results of the study showed a significant improvement that can be seen from the child's ability to identify problems, think critically, logically, and independently in solving problems after the implementation of outbound games. There was a difference in the average pre-test score of 28.73, increasing to 58.13 at post-test with a p value of 0.001 ($p < 0.05$). The application of outbound games has been proven to be able to improve early childhood problem-solving skills, so that it can be a relevant alternative for educators. The practical implications of these findings suggest that outbound games can be used as an effective learning strategy for early childhood educators in developing children's cognitive and social abilities as a whole.

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1. Introduction

Early childhood education (PAUD) is a very important first step in preparing children for further education. Children are in the Golden Age, which is an important phase in the formation of their attitudes, knowledge, and character (Yunarti, 2014). One of the main skills that must be developed is problem-solving skills. This ability involves critical, logical, and systematic thinking skills (Syamsuardi et al., 2024). These skills are essential for solving everyday problems and forming the foundation for a child's future academic and social success (Suciono, 2021; São et al., 2018). The aspects of cognitive development outlined in the Regulation of the Minister of Education and Culture of the Republic of Indonesia Number 137 of 2014 concerning National Standards for Early Childhood Education include: 1) learning and problem solving; 2) logical thinking; and 3) symbolic thinking. First, learning and problem-solving includes the ability to solve simple problems in everyday life. Second, logical thinking includes various

differences, classifications, patterns, taking initiative, planning, and recognizing cause and effect. Third, symbolic thinking includes the ability to recognize, mention, and use the concept of numbers (Lestari, 2020). However, early findings suggest that early childhood problem-solving skills are often not optimally developed (Febrianta, 2016). Children tend to avoid difficulties and rely on the help of adults. They also lack initiative when studying in groups. This shows that the learning method used does not provide opportunities for children to learn problem-solving skills independently (Martuty et al., 2024).

The phenomenon of low problem-solving skills in early childhood is a serious concern because this ability is very important to help children face various problems in their environment. Many early childhood are unable to identify problems, find solutions, or make informed decisions in certain situations, according to relevant educational and research data (Sanrock, 2007; Zimmerman & Schunk, 2011). These limitations can come from two sources. The first is a learning method that does not fully meet the characteristics of early childhood development, and the second is a lack of cognitive stimulation that favors the development of problem-solving skills. According to previous research, play-based learning, such as outbound games, can help children improve their problem-solving skills (Lita et al., 2023). Children can participate directly in difficult situations through these activities, which help them learn to think critically and develop their ability to find solutions. It is difficult for children to adapt to new or complex situations, such as conflicts between friends or tasks that require specific solutions, if they do not have problem-solving skills. Therefore, to improve children's critical thinking skills, flexibility, and confidence, early problem-solving education is essential (Zimmerman & Schunk, 2011).

Teaching problem-solving skills from an early age is a wise way to educate children to be able to face various problems with confidence. This ability helps children recognize problems, evaluate options, and make good decisions in certain situations (Makay et al., 2023). Outbound games, for example, are examples of a learning approach that emphasizes direct engagement. This method gives children the opportunity to hone their critical thinking in an interactive and collaborative environment (Sipayung & Maulidiah, 2024). This activity teaches children to recognize situations that need to be addressed, look for creative solutions, and evaluate the results of their actions. This process not only improves problem-solving skills but also improves social skills, confidence, and strength to face everyday challenges (Sanrock, 2007).

Children who are unable to solve problems effectively may have difficulty in the learning process. According to Sanrock, children's problem-solving abilities are not yet comparable to adults, especially in complex situations that require analysis and decision-making (Restiana et al., 2024). However, previous research has shown that improving children's problem-solving skills can help them cope with everyday problems (Lestari, 2020). Good problem-solving skills allow children to become more independent and confident in facing challenges (Puriani & Dewi, 2021). Early childhood tends to think concretely and cannot do complex abstractions (Nafiati, 2021). Therefore, understanding these limitations allows us to realize that they may face difficulties in solving problems that require abstract thinking.

Sanrock said that providing problem-solving education can be tailored to their developmental stage (Surur & Handarini, 2016). Children between the ages of 5 and 6 are entering a transition phase to concrete operations (Hikmawati, 2018). This phase is characterized by their ability to start thinking logically, even if they remain attached to a real object or situation (Saputra, 2024). Game-based education methods are very effective in improving children's problem-solving abilities due to their tendency to play. Games help children learn to think critically and experiment to solve problems. Learning through play is not only fun for children, but it also helps them understand the basic concepts of problem-solving (Hasna & Wathon, 2018).

To improve early childhood problem-solving skills, it can be done by applying the outbound games method. Outbound games were chosen because this method aims to engage children in tasks that require physical activity and problem-solving, both individually and in groups (Amalina & Vidákovich, 2023). In early childhood education, problem-solving skills in children can be improved through the application of outbound games in ways such as playing leaky pipes, mazes, role play, ball relays, looking for pictures, etc. Learning method-based interventions such as outbound games have been shown to be effective in improving children's problem-solving skills (Hidayat & Hasanah, 2024). Children who participate in outbound play and interactive and challenging learning activities through play show improved their ability to find problems, find solutions, and assess outcomes (Fahyuni, 2017). Other researchers have also found that play-based activities help children communicate, collaborate, and make decisions in a fun and supportive environment (Saturn & Wathon, 2019).

Children who have good problem-solving skills have the ability to face challenges more confidently, understand the causes and impacts of problems, and use their experience and knowledge to find effective solutions (Arbiana et al., 2024; Purnama & Mertika, 2018). This shows how important an innovative and targeted learning approach is to support the development of problem-solving skills from an early age. Experiential learning methods have several advantages, including increasing understanding, relevance, and motivation to learn, as well as developing critical thinking, problem-solving, and collaboration skills (Riska et al., 2023). Based on this theory, the outbound games method is expected to improve problem-solving skills in children.

Previous research has also shown that experiential learning approaches can be used to improve problem-solving skills (Santhalia et al., 2019). This approach involves hands-on experience in solving problems. An experiential

learning model is a learning model that emphasizes learning through hands-on experience (Yusri, 2022). Outbound games are one of the right methods to be applied in improving children's problem-solving skills. Problem-solving, collaboration, and critical thinking are practiced directly in games that involve physical and mental challenges (Harahap et al., 2023). A study shows that this technique is effective in improving various aspects of child development. These include physical-motor, cognitive, and social-emotional development. However, this research is still lacking, especially in Indonesia, on how to use outbound games to improve early childhood problem-solving skills (Syamsuardi & Hajerah, 2018).

There is not much research that clearly links outbound gaming to early childhood problem-solving abilities (Windayani et al., 2021). However, there is evidence that this method works in active learning (Nurhasanah et al., 2016). The application of outbound games in learning activities has been proven effective in improving children's problem-solving skills. Activities designed to help children recognize their potential through hands-on experiences and various forms of interactive activities (Intisari et al., 2024). Outbound games offer solutions with the concept of outdoor-based learning as an effort to improve several aspects of development, including physical motor skills, social skills, and cognitive skills, especially in early childhood problem-solving skills (Rahayu, 2022). Most current research concentrates on the general benefits of outbound methods on child development without paying attention to the impact of these methods on cognitive function, especially problem-solving (Amri & Intisari, 2019). Therefore, this study aims to test how effective outbound games are in improving the problem-solving skills of children aged 5-6 years. It is hoped that this research will add to the current literature by offering creative methods for building early childhood cognitive skills (Devine et al., 2024). In addition, this study will provide advice to educators on how to use this method in student learning.

This research differs from previous research in several important aspects that make it unique and have a significant contribution to the early childhood education literature, particularly in the Indonesian context. Specific Focus on Problem Solving in Children Ages 5–6 Years Most previous studies have only addressed the general impact of outbound games on children's development (physical, social, or cognitive broadly), but have not explicitly examined aspects of early childhood problem-solving skills in a focused manner. This research focuses specifically on children aged 5–6 years in the transition phase to concrete operations—a critical phase for the development of children's logic and systematic thinking.

Problem solving is one aspect of the thinking process in the form of problem-solving skills. In cognitive psychology, the term problem-solving is used extensively to encompass all types of awareness, understanding, and cognitive (Sya'dullah, 2022). Problem-solving skills are part of cognitive development that includes observation, analysis, and action to achieve goals. Previous research has said that an important part of cognitive development is children's ability to use their experiences to formulate hypotheses and collect data (Ery Wahyuti et al., 2023). The purpose of this education is to train children to think critically and make their own decisions, where, when children encounter problems through play, they are expected to see, experiment and communicate (Yuriansa, 2022).

Weikart emphasized that exploration and problem-solving as an active method in the child's learning process are essential (Suryana, 2016). This method not only helps children understand the subject matter but is also essential for building their independence, decision-making skills, and confidence when facing new situations (Rochmah et al., 2019). Independence in children's education is very important. Children who have learned to solve problems independently are better able to adapt to a new environment (Karomah et al., 2024). They are given the knowledge to find solutions to the problems they face, both in education and social life (Amalafitra et al., 2022). This increases their ability to think critically and prevents them from being dependent on others.

Problem-solving doesn't just include the ability to find solutions to problems, evaluate solution options, and evaluate what has been done. At first, children learn to deal with simple problems, such as when their toys don't work or when they argue with peers. The ability to acknowledge this helps learners understand that something is not going according to their expectations, which is where children begin to learn to think logically and reflexively in these circumstances (Wibowo, 2020). Children will try various solutions after finding problems. During this process, students show creativity and different thinking by trying different solutions through trial and error and connecting information from previous experiences (Heryani, 2023). This study shows that learning experiences in the environment, such as play, cognitive stimulation, and guidance from adults, affect problem-solving skills in early childhood. Problem-solving at an early age not only improves children's cognitive development but also affects their social, emotional, and adaptation skills to the environment. Therefore, it is crucial for learners to have a supportive environment, the right stimulation, and the opportunity to take on small challenges. This is the best way to build their problem-solving skills (Fatmawati, 2021).

The concept of physical activity-based learning and exploration, such as outbound games, is intended to accommodate early childhood development, which is still in the concrete-operational stage according to Piaget (Marinda, 2020). Outbound games are learning methods that utilize outdoor play to help children improve their cognitive, motor, social, and emotional abilities (Yetti, 2012). This method presents physical and mental challenges

through fun group activities and encourages the active involvement of children during the learning process. To improve a child's various abilities, outbound games use games that involve exploration, problem-solving, and groups (Iswadi & Herwani, 2021). Simple but challenging elements of play, such as leaky pipes, picture searches, and ball relays, can encourage children to think creatively, work together, and learn through hands-on experience (Akmala & Wathon, 2020). Children learn to identify problems, evaluate options, and find the best solutions to solve problems by presenting situations that require strategies (Gunanto, 2020).

Outbound games are very suitable for application in early childhood learning because they have many benefits that will be obtained. Outbound games have great potential to make learning engaging and interactive because they integrate elements of the game into learning (Falah, 2015). Children use their intuition, creative thinking, and social skills, such as working in a team, when faced with problems (Khotimah & Wathon, 2019). This is in line with the theory of experiential learning, which emphasizes active involvement and reflection in the learning process (Agustin, 2013). Outbound games help children understand abstract concepts in concrete terms by supporting the learning process through hands-on experience (Suwardi et al., 2016). In addition, fun physical activities make children more focused, motivated, and more confident in learning (Sulistiyowati & Watini, 2022). Outbound games are an effective and relevant learning method for early childhood due to a combination of physical and intellectual challenges (Kaliongga et al., 2023). According to Indriana, there are several benefits of outbound games, namely: establishing effective communication, being able to develop a team (team building), learning to solve problems (problem solving), fostering self-confidence, learning leadership, establishing teamwork (synergy), playing entertaining games (fun games), learning to concentrate or focus attention, and practicing honesty and sportsmanship (Santi & Santoso, 2016; Sugandi, 2017).

Based on the analysis of early childhood ability problems, outbound games are one of the effective learning models in improving children's problem-solving skills. Therefore, the outbound game learning model is applied. This game is a form of game by applying outbound games to improve children's problem-solving skills. This game is designed with specific rules based on four stages of problem-solving: (1) understanding the problem, (2) creating a solution plan, (3) implementing strategies, and (4) evaluating the results (Sukaisih et al., 2020). The steps for implementing outbound games are as follows: 1) The preparation stage includes determining the purpose of the activity and the type of game to be played, such as looking for pictures, ball relays, and leaking pipes. Teachers must also prepare the necessary equipment and determine the time and location of the activity. 2) At the implementation stage, the activity is divided into several sessions. For example, a leaky pipe game involves students working together to seal a hole in a pipe to get the ball out of it. Ball relay game, in which students listen to music and take turns bringing the ball to the basket according to the given color. Finally, the image search game, where students receive sample picture cards and simple instructions for finding hidden images. Before each game starts, the teacher explains the tasks and rules of the game as well as examples of activities. The teacher keeps an eye on the students during the activity to ensure that the game runs smoothly. 3) In the final stage, the child's involvement and problem-solving abilities are evaluated during outbound activities. The goal is to use fun and educational play activities to improve early childhood problem-solving skills (Prastiwi & Wathon, 2018). The purpose of this activity is to help children learn to think critically, creatively, and collaboratively, as well as learn to solve problems independently in challenging situations (Mirdanda, 2018). These activities are also intended to improve children's motor skills, increase confidence, and improve their ability to cooperate with peers through interactive games that use strategy and decision-making (Astuti, 2019; Casey, 2023; Wahyuni, 2017).

2. Method

2.1 Research Approaches and Subjects

This study uses a quantitative approach with a type of experimental research in the form of pre-experimental design. The research design used a pretest-posttest design of one group. The subjects of this study were 15 students and only one group was involved as an experimental group. The sampling technique in this study uses a saturated sampling technique where all members of the population are used as samples in the study (Firmansyah & Dede, 2022). This research was conducted at Aisyiyah Bustanul Athfal Bulurokeng Kindergarten, where research participants must meet certain criteria, such as children aged 5-6 years who have never applied problem-solving skills from any media. The experiment was carried out through three stages, namely pre-test, treatment, and post-test.

Table 1. Research Design One Group Pretest-Posttest Design

<i>Post-Test Prates Treatment</i>		
O1	X	O2

Information:

O1 = Pre-test score or observation of the child's problem-solving ability before being given outbound games learning treatment.

X = The treatment given is learning outbound games.

O2 = Post-test score of improvement in children's problem-solving ability after being given outbound games learning treatment.

2.2 Data Collection and Analysis Techniques

Research instruments are tools that help researchers collect data (Scott, 2015). The data to be collected determines the type of research instrument chosen. However, in this study, the instrument used is an observation guideline. The validity used in this study is the validity of the content (*Content validity*) with the Gregory technique. After the instrument is prepared, it is then consulted with an expert (*Expert Judgment*). The validity of an instrument indicates the ability of an instrument to measure what it should be measured. Experts validate in order to obtain evidence of the validity of the content, which is then revised by experts. The data analysis technique used was nonparametric statistics using the Wilcoxon Signed Rank Test to evaluate differences in the treatment of research subjects. It is used for two paired samples and data that are not normally distributed with n samples < 25 (Riadi, 2016). The Wilcoxon Signed Rank Test procedure can be performed by determining a hypothesis and then testing the hypothesis with a significant rate of 0.005 or 5%. Drawing conclusions and statistical testing based on hypothesis testing will be carried out using IBM SPSS 25.

The achievement of problem-solving skills in children aged 5-6 years can be identified through several indicators which include the ability to understand problems, plan solutions, implement strategies, and evaluate results. It is expected that when children understand the problem, they can recognize the core of the problem, find relevant information, and demonstrate an initial understanding of the context of the problem. When children have the ability to plan problem-solving, they show the ability to create simple, logical plans or steps to solve them. Children can also think of several solution options, choose the most appropriate one, and visualize what needs to be done to achieve a solution. When children try to implement the plan that has been made, use tools, and remain patient and consistent in doing so, children show the ability to implement problem-solving strategies. Children can also adapt when facing obstacles by adjusting the strategies used.

When children can reflect on their problem-solving processes and outcomes, they have the ability to evaluate the results. This allows them to find faults or shortcomings in the approach they use, provide reasons for what works or doesn't work, and think of ways to improve or refine solutions in the future. This indicator of problem-solving achievement shows the child's ability to think logically and systematically. They also build decision-making skills, critical thinking, and independence that are essential for their success in many aspects of life.

This assessment involves input from supervisors, early childhood education experts, and teachers who are experienced in assessing learning tools. This test measures three aspects of problem solving in children, namely the ability to recognize problems, find solutions, and evaluate results (Sudarmo & Mariyati, 2017). After each treatment session, the children received an evaluation of the results of the problem-solving instrument. The test, a nonparametric statistical method, was used to test the hypothesis of this study. The test compares the results of the pre-test and post-test groups of the experimental group to determine if the treatment results in significant improvement. The data analyzed consisted of the difference in scores between the pre-test and post-test groups. This analysis method can be applied to a relatively small sample of data and does not meet the assumption of normality

3. Result

The results of this study aim to analyze the influence of the implementation of outbound games on the problem-solving ability of children aged 5-6 years. Observational guideline tools collect data by measuring three main components: about the problem, finding a solution, and evaluating the results. The Wilcoxon Signed Rank test was used to compare pre-test and post-test scores from the experimental group.

Table 2. Pre-test table

No.	Name	Sign	Predicate
1	ALK	16	BB
2	RYH	30	BB

No.	Name	Sign	Predicate
3	PUL	20	BB
4	IRH	25	BB
5	FDL	17	BB
6	NUR	48	BSH
7	KSN	29	BB
8	QNT	27	BB
9	DRS	22	BB
10	ARY	48	BSH
11	TFK	28	BB
12	RYA	31	BB
13	KFA	48	BSH
14	HRN	19	BB
15	NDN	23	BB

Prior to treatment, pre-test results showed that children's problem-solving abilities were low on average, with most participants having difficulty recognizing problems and finding solutions.

Table 3. Post-test table

Not	Name	Sign	Predicate
1	ALK	48	BSH
2	RYH	60	BSB
3	PUL	64	BSB
4	IRH	60	BSB
5	FDL	48	BSH
6	NUR	64	BSB
7	KSN	61	BSB
8	QNT	64	BSB
9	DRS	58	BSH
10	ARY	48	BSH
11	TFK	57	BSH
12	RYA	55	BSH
13	KFA	62	BSB
14	HRN	62	BSB
15	NDN	61	BSB

After treatment, post-test results showed a significant improvement in problem-solving skills, with some children able to identify problems independently, find solutions, and evaluate results independently. Children showed significant improvements in recognizing problematic situations, formulating solution strategies, and assessing the effectiveness of the chosen solution, which reflected developments in critical, creative, and reflective thinking.

Table 4. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
<i>Pre-tests</i>	15	16	48	28,73	10,977
<i>Post-tests</i>	15	48	64	58,13	5,829
Valid N (<i>in the direction of the list</i>)	15				

Table 4 shows that the average score on the post-test (58.13) is much higher than on the pre-test (28.73), suggesting that the use of outbound games can improve children's problem-solving skills. A lower standard deviation score (Std. Deviation) at post-test (5,829) indicated that improvements were achieved more evenly among participants, indicating uniform treatment effectiveness. This study had no control group, and the sample size was small (n=15). To improve the validity of the results, further research is recommended to use an actual experimental design with the control group. The development of more standardized instruments can also lead to more honest results. Therefore, the findings of this study show that the outbound games method can be an effective method to improve the problem-solving skills of children aged 5-6 years. This research is very relevant to be applied in the early childhood education environment.

To test the hypothesis that the use of the outbound games method has a significant effect on the problem-solving ability of children aged 5-6 years, quantitative research results were obtained from the comparison of pre-test and post-test scores using the Wilcoxon Signed Rank Test method.

Table 5. Nonparametric Statistical Tests

The Wilcoxon test is used to determine if there is a significant difference between data that does not meet the assumption of normality.

	Posttest - Pretest
Z	-3,297b
Asimpa. Sig. (2 tails)	,001

- a. Wilcoxon Signed Rating Test
- b. Based on negative ratings.

The Z value indicates the results of statistical calculations, which consist of the difference in the increase and decrease in ratings between pre-test and post-test. Higher rating increases, which means most post-test scores are higher than pre-tests. Asimpa. Sig. (2-tailed) = 0.001 This is the p-value of the two-tail test. The results are considered statistically significant because the value p(0.001) is smaller than the level of significance found, which is usually 0.05. This means that pre-test and post-test scores are very different. So, the results of the treatment have a significant effect. The outbound games learning method significantly improves the problem-solving skills of children aged 5-6 years.

Qualitative results were obtained from direct observation during outbound learning sessions, which showed changes in student behavior. These changes include actively participating, cooperating, and being creative in solving various challenges given. The results obtained are summarized in several key findings that illustrate indicators of children's problem-solving ability: understanding problems, planning solutions, implementing strategies, and evaluating results.

The first indicator, understanding the problem: The results of the observations showed that the children were able to understand the core of the problem given in an outbound game designed to challenge them to recognize the situation that needed to be solved. In the leaky pipe game, children are asked to fill water into the hole of the pipe to make the ball inside rise to the top. Children quickly realize that water is constantly coming out of the pipe hole, so a way is needed to close the hole. Teachers see that children understand that the main problem preventing their success is "leaking water." Children are asked in the ball relay game to move the ball from one point to another using a semicircular pipe without dropping it. The children understand that they need to maintain team coordination so that the ball does not fall. Kids are given visual clues in the picture search game to find the hidden images in a

specific place. They demonstrate the ability to connect clues to location, understand context, and realize that images may be hidden with certain patterns.

The solution planning stage is evident in all games. Students make a simple plan for a leaky pipe game. For example, one group is asked to fill a hole with water while another group is asked to close the hole. Children do ball relays by planning the position of the pipe to make it more stable and talking about the right speed to move the ball. One of them even suggested that the ball wouldn't slip by "keeping the pipes aligned." Children create search strategies for picture search games, such as dividing the location area into sections and searching systematically. They also use instructions to prioritize the areas that are most likely to hide the image.

When children begin to implement their plans, their ability to strategize becomes clear. They work well together in the leaky pipe game, but when water leaks, they have to try new approaches, such as adding props to better cover the holes. Children show their ability to communicate and follow the same steps in the ball relay. They demonstrate the ability to adjust when the ball drops, quickly adjusting the pipe to make it more stable rather than blaming each other. Children show a willingness to try different search methods, such as digging in the sand, lifting the lid of a box, or checking behind a tree, while looking for a picture. They stay focused on the task and use clues to guide their quest.

The reflection done by the students after each match shows the evaluation stage. Kids can say what works and what doesn't work in a leaky pipe game. "If all the holes are not closed, the water runs out again, so we have to close them faster," said one of the children. In addition, they realized that the timing coordination between the hole cover and the water filler was essential. Children are able to identify mistakes in ball relays, such as moving too fast or lack of communication. The teacher noted that they began to learn to coordinate their movements and make sure the pipes didn't move too far away from the ball. When looking for pictures, children evaluate the clues they use. They talked about their difficulties in understanding some of the clues, and they began to create better ways to search again.

The results showed that outbound gaming activities, such as leaking pipes, ball relays, and image searching, made a significant contribution to early childhood problem-solving abilities. These games involve many elements, from understanding the context of the problem to assessing the outcome. All of these aspects help improve logical, critical, and creative thinking skills. While games like leaky pipes emphasize the importance of coordination and collaboration, ball relays teach patience and accuracy. Looking for pictures encourages children to use their imagination and think logically. Kids are ready to face future challenges with real experiences through these games. This study found that the outbound games learning method is effective in improving early childhood problem-solving skills to hone their social and emotional skills.

4. Discussion

The results of the study show that outbound games are effective in improving early childhood problem-solving skills. This is in line with Kolb's experiential learning theory, which states that experiential learning can help children improve their ability to solve problems independently (Digest, 2022). This research confirms previous findings, which stated that outbound games aim to help children recognize their potential through various interactive challenges and activities (Susy Humayrah & Sri Watini, 2022). The interactive, outbound, game-based approach stimulates children's enthusiasm and desire to learn through hands-on experience (Harahap et al., 2024). Outbound games encourage children to explore different solutions independently and collaboratively. In addition, a supportive play environment helps children become more focused on activities, thus accelerating the overall development of early childhood problem-solving skills.

Some of the factors that support the improvement of children's problem-solving skills include teaching methods, learning materials, and the quality of facilitators (Ismunandar, 2023). A significant influence of these factors is due to the use of teaching techniques that suit the needs of early childhood, which emphasizes play-based activities (Idhayani et al., 2023). Students have real experience in identifying, planning, and solving problems through outbound activities such as leaking pipes, ball relays, and image searches (Nainggolan et al., 2017). According to Polya, this activity reflects four stages of problem-solving: (1) understanding the problem through direct observation, (2) creating a solution plan by speaking, (3) implementing problem-solving strategies in the game, and (4) evaluating the outcome by talking about the successes or problems faced (Yustitia, 2015). Therefore, the findings of this study support the previous idea that involving children in real-life situations helps them learn to think logically, critically, and creatively (Soleha et al., 2024).

According to Suryani, outbound programs use challenge-based learning to improve independence and social skills (Shodiq, 2023). Diamond also supports this, stating that problem-solving is a skill that is built early on and contributes greatly to a child's courage in facing new situations (Oktaviany et al., 2021). In this study, for example, the children managed to complete a game like a leaky pipe despite initial difficulties, demonstrating their courage and confidence in trying new methods (Yetti & Muanivah, 2017). By adding evidence that outdoor physical activity-based play also has an impact on children's cognitive abilities, especially in problem solving, the results of this study enrich

the theory of experiential learning (Kusumawati et al., 2023; Nugraheni, 2021). In addition, this study expands on the results of Munawwirah, who states that problem-solving methods are the basis of the philosophy of constructivism, which emphasizes exploratory and active learning (Kasturi, 2022). This research shows that outbound games can be used as an alternative learning method in early childhood education institutions because they can improve children's motor, cognitive, and social skills (Wahyu & Rukiyati, 2022).

This research helps to develop new learning methods that suit the needs of early childhood development, especially to improve critical and creative thinking skills (Soeyono, 2014). However, the long-term impact of the application of this method requires additional research because the limitations of this study lie in the limited implementation time during the five days of school activities. The fact that there is a significant improvement in problem-solving skills shows that the outbound games method provides a more enjoyable and contextual learning experience, which encourages children to actively participate (Primayana et al., 2019). This is in line with Piaget's constructivist theory of learning, which says that children learn through active interaction with their world (Hendrowati, 2015). These results also support the findings of previous research by Widiastuti, which found that outbound games can improve children's social and cognitive intelligence (Nasution, 2018). This study supports these findings, but the significant difference from this study lies in how it focuses on problem-solving skills. Outbound games provide multisensory stimulation that improves children's memory and critical thinking skills. This is different from conventional approaches, such as discussions and questions and answers (Ramdani et al., 2023). Compared to the results of Hidayati's (2020) research, which shows that educational games have a positive impact on cognitive development. This research It also broadens insights into how structured games, such as outbound games, can hone children's critical thinking skills.

Overall, this study answers the hypotheses proposed and can serve as a basis for further research. However, the limitations of this research could inspire similar research in the future. The small number of study subjects is one of its limitations, which can affect the generalization of results. The study was also limited to a specific age range (5-6 years), so the results may not be representative of all age groups of children. Additionally, the study has not fully explored how each type of outbound game contributes to problem-solving skills, including the ability to understand problems, plan solutions, use strategies, and evaluate outcomes. By taking a closer look at each of these indicators, teachers can provide more accurate insights into which games are most effective for each stage of problem-solving. For example, a leaky pipe game can help students learn to work together in solving problems, while a ball relay can help them learn to strategize and work together. In addition, the study has not investigated external elements that can affect the success of outbound play, including the role of facilitators, environmental conditions, and children's participation levels. A child's learning experience during activities can be influenced by these factors.

In addition, this study has not seen the long-term results of the application of the outbound games method on early childhood problem-solving ability. More research is needed to determine the extent to which the benefits of outbound gaming persist over time and how they affect the development of skills such as cooperation and decision-making. These results suggest that teachers who teach early childhood should consider using game learning methods as an alternative. This research also opens our eyes to the importance of unconventional methods to support children's cognitive development (Soekardi, 2024). The limitations of this research may help improve the quality of future research and provide a better understanding of how outbound games function as learning strategies that help young children learn to solve problems. This research also expands knowledge on how structured games, such as outbound games, can improve children's problem-solving skills

5. Conclusion

The results of the study show that the learning method of outbound games can improve early childhood problem-solving skills. The application of outbound games has a significant impact on improving the problem-solving skills of children aged 5-6 years. Improved capabilities are seen in three main aspects: recognizing problems, finding solutions, and evaluating outcomes. This method not only trains children's cognitive skills but also builds confidence, creativity, and the ability to work together. The results of this study support the theory of experiential learning and are relevant to be applied in early childhood education as an effective alternative to non-conventional learning. However, this study has some limitations that can be corrected in future research. One of the factors that affect the generalization of results is the limited number of study subjects. The study also focused on a specific age range, so the results may not be representative of early childhood outside of that range. To determine the changes that occur over time, further observations are needed to determine the long-term impact of the application of outbound games on early childhood problem-solving skills. It is recommended that educators start integrating outbound games into early childhood learning activities because they have been proven to be effective in improving problem-solving, creativity, and cooperation skills. Policymakers can support through teacher training and the provision of facilities that support experiential learning.

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