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Improving Student's Reading Comprehension in Recount Text by Using Concept Oriented Reading Instruction

Imam Nur Aziz

Universitas Kiai Abdullah Faqih Gresik

imamnuraziz@gmail.com

Abstract

This research aims to improve the student's reading comprehension in recount text by using Concept Oriented Reading Instruction strategy. The research was classroom action research (CAR). It is divided into pre-cycle, cycle I and cycle II. The writer used test, observation, and interview as the instrument of collecting data. Based on the results of test showed that there was an improvement of students achievement in reading recount text. The mean of pre-test was 47, 82 then, the mean of the first cycle was 56,95 and in the cycle II was 82,60. It indicated that the scores in each cycle was increased and the mean score of post-test in cycle II were better than the mean of the post-test of cycle I. Based on observation and interview showed that most of the students had improvement motivation in learning reading. Moreover, CORI strategy can improve the learning motivation and achievement especially in comprehending recount text. The finding shows an improvement in student's reading comprehension through Concept Oriented Reading Instruction (CORI) strategy. Thus, it can be concluded that the Concept Oriented Reading Instruction can improve the reading comprehension in recount text.

Keywords: Reading Comprehension, Recount Text, Concept Oriented Reading Instruction (CORI)

I. INTRODUCTION

In industry 4.0, globalization is very rapid, where the problems faced will be more complicated and complex, followed by the need for someone who can provide solutions in problem-solving in all fields. Lack of ability to create new values through creative thinking, developing product and service innovations, new types and methods of work, new ways of thinking, individual mental changes to collaborative and communicative, and open-minded are the main obstacles for students to meet the digital age. Maybe it is caused by computational thinking on the application of language learning is very minimal. While in the world of education evolution of technology development is very influential on the learning-teaching process. To make students ready to face all problems and all forms of growth in the technological era, students must have complete thinking in problem-solving and critical thinking. An educator must use various techniques to teach computational thinking for students to realize good descriptive writing.

Computational thinking skills are an important aspect of education in today's digital age. In the context of descriptive writing, this ability plays a significant role in designing, organizing, and structuring information logically and efficiently. However, students often face difficulties in developing their computational thinking skills in descriptive writing. Previous research has shown that problem-solving methods can be an effective solution to improve students' computational thinking skills. Consequently, the researchers sought to investigate the efficacy of using experimental problem-solving approaches in enhancing students' computational thinking abilities in the context of descriptive writing, and if so, in what extent such methods could improve these abilities.

Computational thinking is the ability to think in designing systems to solve problems by first describing basic concepts in computing (Rodríguez-Martínez et al., 2020). So, it can be concluded that computational thinking has a critical and logical way of thinking that students usually must have to solve a problem. Computational thinking directs students to design systems as the principles of how computers work to get

the right solution by looking at the problem from a new point of view.

Students who have computational thinking play an important role in solving social and educational problems because in computational thinking, there are aspects such as decomposition, abstraction, pattern recognition, algorithms that are the best solution in solving a problem altogether (Youjun & Xiaomei, 2022). This is what makes students are required to have computational thinking in all subject areas, especially English language learning which in this field of study is still very minimal application. To familiarize students with problems or problems with the principles of computer work, the teacher understands technology and how to teach appropriately (pedagogy) and what materials will be taught (learning content). Therefore, teachers should be required to understand the use of tools, strategies, materials, and solving problems with computational thinking.

In this research, the researcher combines computational thinking with problem-solving. Problem-solving methods are needed in computational thinking, where this method is the ability to solve obstacles or when learners are trying to achieve a particular goal (Caeli & Yadav, 2020). Problem-solving has a concept in which every individual can perform cognitive processes understanding and solve a problem, and it will find solutions that are difficult to explain in detail and quickly. Cognition refers to the mental processes involved in connecting, evaluating, and contemplating an event or situation, demonstrating people's capacity to engage in such cognitive activities. The process of cognition is related to using a level of intelligence that characterizes a person using a variety of interests mainly aimed at ideas and learning (Cai & Leikin, 2020). By using the previous explanations, learners are encouraged to use the relevant knowledge they have on a problem and use previous knowledge, identify the obstacles encountered in problem-solving. Evaluate other means and structure the actions necessary to achieve the goal by processing the information obtained and then choose other ways to perform actions oriented to a particular goal (Sun et al., 2020).

Previous research on problem-solving methods towards student's computational thinking skill in descriptive writing explained that to improve students' computational thinking skills in writing descriptions using problem-solving methods (Parsazadeh et al., 2021). The findings of the research were derived from the execution of the first cycle and second cycle class actions and showed an increase in students' computational thinking skills in writing descriptions after using problem-solving methods. The problem-solving methods used in the research include the stages of understanding the problem, planning solutions, implementing solutions, and evaluating solutions. Thus, such research can contribute to the development of learning to write more effective and efficient descriptions, as well as improve students' computational thinking skills.

Based on the search results, here are some effective problem-solving methods for improving students' computational thinking skills in descriptive writing are Facilitating problem-solving skills through programming skills (Markandan et al., 2022), Involving students in programming activities (Markandan et al., 2022), Defining the problem, Gaining a comprehensive understanding of the whole of the issue and the interconnectedness among its many components in order to provide a dependable solution (Tekdal, 2021), The use of problem-solving skills encompasses several activities, including creating, writing, engaging in philosophical reasoning, budgeting, and even engaging in strategic gameplay such as Shogi or Chess (Tekdal, 2021), Using well-structured computational thinking problem sets (Pelánek & Effenberger, 2023). By using these methods, students can improve their computational thinking skills and apply them to descriptive writing. It is vital to acknowledge that computational thinking encompasses a collection of problem-solving skills that students must acquire and enhance. Over time, its significance has steadily increased as a cognitive approach for tackling intricate or indeterminate scenarios.

The primary objective of this research is to empirically evaluate the efficacy of problem-solving methods in enhancing students' computational

thinking abilities and their overall academic performance in descriptive writing. The problem statement includes questions regarding the extent to which the use of experimental problem-solving methods can improve students' computational thinking skills in the context of descriptive writing, as well as their impact on student learning outcomes. To achieve this goal, this study will measure the level of students' initial computational thinking skills before the application of problem-solving methods, then apply these methods experimentally in learning descriptive writing in educational environments. After that, the study will re-measure the level of computational thinking ability of students and analyze significant differences between the initial level and after the application of the method. In addition, this study will also evaluate the impact of using experimental problem-solving methods on student learning outcomes in descriptive writing. Therefore, this study is anticipated to provide more profound understanding about the efficacy of problem-solving approaches in enhancing students' computational thinking abilities and their relevance in the educational context of descriptive writing.

II. METHODS

This research employed a quasi-experimental method of nonequivalent control group design to examine the impact of Problem-solving Methods on the Computational Thinking ability of students' descriptive writing. This design has pre-test and post-test control groups. In the context of quasi-experimental research, it is not given random tasks as in true experimental research because randomized assigning can impair the learning process in the classroom (Ary, 2012). The intervention was administered to the experimental cohort amid the learning process, and pertinent information regarding pupils' Computational Thinking capacity was gathered. The collected data underwent examination via appropriate statistical techniques, to compare outcomes between the two groups. The data analysis results were interpreted to assess whether a significant difference in Computational Thinking ability in descriptive writing existed between the experimental and control groups.

PARTICIPANT

This study involved 58 students of Madrasah Tsanawiyah (MTs) in Gresik as research subjects. The participants were selected using the purposive sampling method based on criteria, including being active MTs students and having basic skills in descriptive writing. They come from different classes in MTs, with gender variations reflecting the diversity in this educational environment. These students divided into experimental and the control group, to carry out research with quasi-experimental methods. Before participants were involved in this study, permission had been obtained from the MTs school in Gresik, and written consent was also obtained from the parents or guardians of each student who would be involved. In the research process, participants follow treatment based on their respective groups. The experimental group received treatment with problem-solving methods in learning descriptive writing, while the control group followed conventional learning. This study aimed to provide substantial findings in supporting existing research conclusions pertaining to the efficacy of problem-solving approaches in enhancing students' computational thinking abilities within the domain of descriptive writing in the Madrasah Tsanawiyah environment in Gresik.

INSTRUMENT

In order to gather data that is relevant to the research goals outlined in the study "Problem-solving Methods towards Student's Computational Thinking Skill in Descriptive Writing" using quasi-experimental methods, several instruments have been prepared. First, a problem-solving questionnaire was given to experimental group students to measure their understanding of computational thinking concepts before and after treatment. This instrument is expected to help identify changes in students' understanding of problem-solving skills related to descriptive writing. In addition, pretest and posttest also used to measure students' computational thinking skills before and after the application of problem-solving methods in learning descriptive writing. Data from this pretest and posttest provide a clear

picture of changes in students' ability to think computationally after following learning with problem-solving methods.

Then, teaching practice instruments were used to observe how teachers implement problem-solving methods in learning descriptive writing. These observations provide a deeper understanding of the implementation of problem-solving methods by teachers and interactions between teachers and students during learning. Finally, the teaching materials used in the experimental group collected and analyzed to understand the content and learning approaches related to problem-solving methods. This teaching material helps in understanding the learning context used in this study. These instruments comprehensively be used to collect the necessary data in order to analyze the effectiveness of problem-solving methods in order to enhance students' computational thinking abilities and improve their academic performance in the domain of descriptive writing, it is essential to use effective strategies and interventions.

PROCEDURE

The study adopted a quasi-experimental design involving careful procedural steps. First, class selection was done randomly from schools willing to be research subjects, and each class is identified as an experimental group or control group. The experimental group received treatment with problem-solving methods, while the control group underwent conventional learning.

The next step was to pretest both groups before the application of the problem-solving method. This pretest aimed to measure students' initial computational thinking skills in descriptive writing. After that, the experimental group followed several learning sessions with problem-solving methods, followed by a posttest like a pretest. This posttest was used to measure changes in students' computational thinking skills after following learning with problem-solving methods. The data obtained from the pretest and posttest will undergo statistical analysis in order to assess the efficacy of problem-solving techniques in enhancing students' computational thinking abilities. Therefore, this study employed a quasi-experimental

methodology to get a comprehensive knowledge of the influence of problem-solving approaches on students' computational thinking abilities within the domain of descriptive writing...

III. FINDINGS

The results of statistical analysis, hypotheses and post-test pre-tests are included in the data. Pro-tests are designed to determine students' computational thinking skills in descriptive writing before providing treatment, where post-tests are designed to determine whether a student's computational thinking skills in descriptive writing improve after providing treatment which is a problem-solving method.

INITIAL ABILITY BEFORE BEING TREATED.

The results of measuring students' learning outcomes against research subjects at the time of pretest can be seen in figure 1 below:

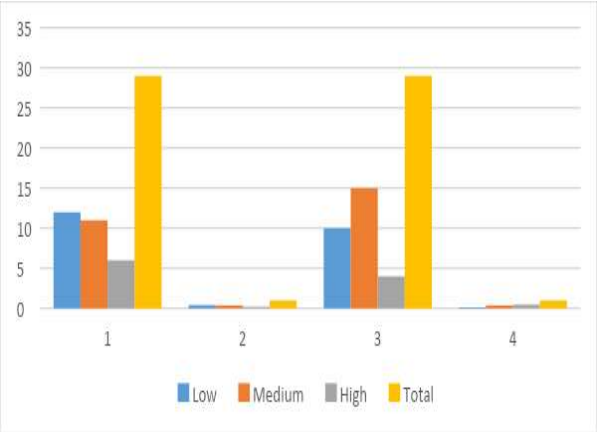

Figure 1: *Categories of Student Learning Outcomes on Pretest*

Table 1 presents discernible pretest outcomes. Of the total participants, 41.00% in the control group were classified as low achievers, while 38.00% were categorised as medium achievers. Of the total participants, 41.00% in the control group were classified as low achievers, while 38.00% were categorised as medium achievers. The remaining 21.00% were considered high achievers. In the experimental group, 14.00% fell into the low category, while 38.00% and 48.00% were classified as high achievers.

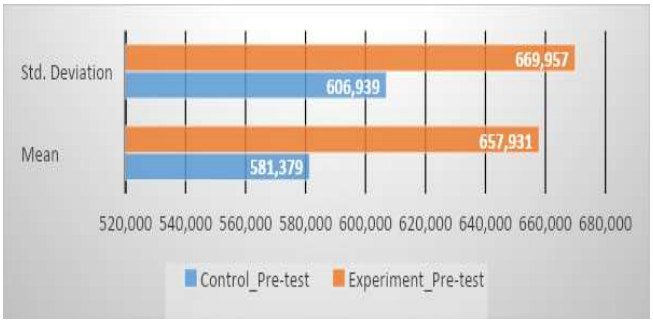

Figure 2: *Descriptive Analysis Pre-Test Control Class and Experimental Class*

Table 2 displays objective data, which indicates that the control classes had a mean pretest score of 58.13 with a standard deviation of 6.06939. The minimum and maximum values for the pretest in the control class were 50.00 and 71.00, respectively. In contrast, the experimental class had a mean pretest score of 65.79 and a standard deviation of 6.69957. Technical abbreviations have been explained upon their first use in the text. In contrast, the experimental class had a mean pretest score of 65.79 and a standard deviation of 6.69957. The pretest scores in the experimental class ranged from 55.00 to 80.00. Based on the data obtained, the mean value of the experimental group exceeds that of the control group. A difference of 7.6 exists between the mean pretest scores of the control and experimental classes.

PRETEST VALUE NORMALITY TEST

Normality tests are administered to determine if the samples obtained originate from a population that conforms to a normal distribution. The outcomes of the normality test can be viewed in the Tests of Normality table after utilizing SPSS 16.0 for Windows. The Shapiro-Wilk test, which is widely utilized to evaluate the normality of a distribution, was employed as the normality test in this study. Table 3 presents the findings of the normality test performed on the data.

Table 3

The results of the pretest normality test for both the control class and the experimental class are shown.

Tests of Normality

a. Lilliefors Significance Correction

	Shapiro-Wilk		
	Statistic	df	Sig.
Pretest_Kontrol	.925	58	.041
Pretest_Eksperimental	.950	58	.183

Table 3 displays that the pretest significance of the experimental class learning outcomes is 0.950, while that of the control group is 0.925, both of which have a p-value greater than 0.05, signifying the acceptance of the null hypothesis (H0). Based on these results, it can be inferred that both groups' data have a normal distribution.

PRETEST VALUE HOMOGENEITY TEST

Homogeneity testing is performed to assess whether variations stem from a common population or demonstrate

significant differences. Within this investigation, the homogeneity test applied the Levene technique. To determine data homogeneity, the significance value is used, with homogeneous data being indicated by a significance value greater than 0.05, while non-homogeneous data is indicated by a significance value lower than 0.05. Table 4 displays the results of the homogeneity test data.

Table 4

Pretest Homogeneity Test Results Control Class and Experiment Class

Homogeneity Test

Levene Statistic	df 1	df2	Sig.
4.979	6	17	.006

Based on the data displayed in Table 4, the pre-test significance value for learning outcomes in the experimental and control classes is above the 0.05 threshold, at 0.06. Consequently, the null hypothesis (H0) is accepted, confirming that both groups originate from populations with comparable variances and, thus, demonstrating homogeneity.

PRETEST AVERAGE DIFFERENCE TEST

The means of two groups from distinct samples were assessed using the One-Way Analysis of Variance (ANOVA) test. The statistical test employed in this research is the One-Way Analysis of Variance (ANOVA) test. A normality test was carried out before conducting the One-Way ANOVA test. Choosing the appropriate One-Way ANOVA test involves performing a population prerequisite test and a population variance homogeneity test. The study employed the One-Way Analysis of Variance (ANOVA) two-sample test with a predetermined significance threshold of 0.05 for hypothesis testing. In the case where the significance level exceeds 0.050, it suggests that both groups have a similar meaning. Table 5 displays the results for various average test data.

Table 5

One Way ANOVA Pretest Test Control Class and Experimental Class

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	543.50	911	49.410	1.178	.369
Within Groups	713.25	017	41.956		
Total	1256.75	928			

Based on data above, the pretest significance value for student learning outcomes is 0.369. This value exceeds the threshold of 0.050 (0.369>0.050), suggesting that prior to the treatment, both sample groups had equivalent economic capacities.

FINAL ABILITY AFTER TREATMENT

The post-test scores of the experimental and control classes can be depicted and classified using intervals. Interval distance is calculated by subtracting the minimum score from the maximum score (ideal score) and dividing the result by the number of interval classes. According to the learning outcomes score, the sample group values can be classified into three categories: high, medium, and low.

Table 5 displays that the post-test outcomes in the control classes revealed that 21% of students fell into the low group, while 55% were categorized as moderate and 24% demonstrated high achievement. The experimental group showed that 38% of students were categorized as low achievers, 34% were found to be moderate achievers, and the remaining 28% demonstrated high achievement. Based on the results of post-tests conducted in both control and experimental groups, a descriptive analysis can be carried out in the following manner.

Table 6

Control Class Post-test Descriptive Analysis Table

Experimental Class

	N	Minimum	Maximum	Mean	*Std. Deviation*
Control_class	58	58.00	90.00	72.6552	*7.77485*
Experiment_class	58	60.00	85.00	70.6897	*8.58197*
Valid N (listwise)	116				

Based on the findings presented in Table 6, the results of the post-test for the experimental groups, comprising 58 students in total, demonstrate an average score of 70.68 with a standard deviation of 8.58. The Experimental class recorded a minimum post-test score of 60.00 and a maximum score of 85.00. On the other hand, the control group displayed an average post-test score of 72.65 alongside a standard deviation of 7.77. The mean value of the experimental group surpasses that of the control group, indicating a discrepancy of 1.97 between both groups' mean post-test values. The post-test results of the control group

range between 58.00 and 90.00. The mean value of the experimental group surpasses that of the control group, indicating a discrepancy of 1.97 between both groups' mean post-test values. The mean value of the experimental group surpasses that of the control group, indicating a discrepancy of 1.97 between both groups' mean post-test values.

Normality tests are utilised to ascertain if the collected samples are derived from a population that adheres to a standard distribution. Subsequently, the SPSS 16.0 for Windows generates a Tests of Normality table to display the results of the normality test. The statistical technique employed to evaluate normality is the Shapiro-Wilk test, which is extensively employed to assess the assumption of normal distribution. The data's normality test outcomes are shown in Table 4.10.

Table 7

Results of The Posttest Normality Test of Control Class and Experimental Class

	Shapiro-Wilk		
	Statistic	df	Sig.
control_class	.97	858	.787
experiment_class	.88	858	.005

a. Lilliefors Significance Correction

*. This is a lower bound of true significance.

Based on the results presented in Table 7, it is evident that there is a significant difference in the post-test experimental class learning outcomes compared to the control group with values of 0.005 and 0.787, respectively. The significance level found for both groups is >0.050, indicating that the null hypothesis can be accepted. Additionally, the data for both groups appear to be normally distributed.

POST-TEST AVERAGE DIFFERENCE TEST

The mean differences between two groups from distinct samples were assessed using the One-Way Analysis of Variance (ANOVA) test in this study. The appropriate statistical method was the One-Way ANOVA test. The selection of the appropriate One-Way ANOVA test was based on the results of these tests. Prior to conducting the ANOVA test, two preparatory tests had to be conducted to ensure population normality and homogeneity of population variance. The hypothesis testing procedure employed in this study involves the usage of a two-sample comparison test, specifically the One-

Way Analysis of Variance (ANOVA) method, with a set significance threshold of 0.05. A p-value exceeding 0.050 indicates that the means of the two groups are almost equivalent. The results of the test data's diverse averages are presented in Table 8.

Table 8

One Way ANOVA Posttest Test Control Class and Experiment Class.

ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	858.385	9	95.376	2.172	.074
Within Groups	834.167	19	43.904		
Total	1692.552	28			

Based on the data presented, the post-test significance value for student learning outcomes is 0.074, which is higher than the threshold of 0.050 (0.074<0.050). This suggests that both sample groups demonstrate comparable writing ability after the experimental intervention.

IV. DISCUSSION

The primary aim is to demonstrate the impact of problem-solving techniques on students' computational thinking abilities and descriptive writing skills. The experimental group and control group averaged 72.6 and 58 post-test results, respectively, on the computational thinking scale. Following treatment with problem-solving methods, the average post-test score for the experimental group on descriptive writing improved significantly. The growing significance of computational thinking expertise owing to a world that's increasingly reliant on technology has led to a greater focus on its honing among students. Comprehending computational concepts like programming logic, algorithms, and decision-making form the crux of computational thinking skills. Regarding learning descriptive writing, applying problem-solving methods can enable the learners to cultivate a structured thought process, akin to conceiving algorithms in computer programming (Ng et al., 2022).

This research implements problem-solving methods into the process of learning descriptive writing. Students are taught to design a cohesive structure

for their ideas in descriptive writing, including formulating concepts in a structured manner, organizing information effectively, and developing a detailed and cohesive narrative. The problem-solving method is utilized in numerous stages, from the conception of ideas to the production of the final manuscript. Data were gathered through pre- and post-implementation testing of problem-solving methods, as well as surveys examining students' perceptions of their computational thinking abilities. Appropriate statistical techniques will be employed to analyse the data and determine the extent to which the implementation of problem-solving methods had a significant effect on enhancing students' computational thinking skills.

The expected results of this research project aim to offer a deeper insight into how the use of problem-solving methods when teaching descriptive writing could boost students' computational thinking skills. This approach leads to a teaching strategy that integrates concepts of computational thinking into the field of writing education. Integration equips students with essential skills to navigate the obstacles presented by an ever-changing computational landscape. (Sari et al., 2021) conducted a study exploring the correlation between writing learning and problem-solving methods. The study demonstrated that students who adopted a problem-solving approach in their writing experienced a significant enhancement in their computational thinking abilities. This occurs because problem-solving techniques encourage students to tackle writing issues with a systematic and rational approach, similar to that used in computer programming problem-solving.

In education, these findings carry great significance. Utilising problem-solving techniques in instructional practices to boost descriptive writing could foster the development of computational thinking skills in students. This aptitude holds significant relevance in the present-day information technology age, where its importance is consistently on the rise. Additionally, previous research studies, including our own, suggest that integrating computational thinking principles into writing instruction can effectively

improve the digital literacy skills of students. However, it is crucial to recognize that this investigation has notable limitations, such as a small participant group and external factors that can influence the computational thinking abilities of pupils. Further research is necessary to explore the refinement of problem-solving approaches in writing education, with the objective of promoting the wider development of students' computational thinking skills.

PROBLEM-SOLVING METHODS FACILATES STUDENTS' COMPUTIONAL THINKING IN FORMULATING WRITING IDEAS.

With the rise of technology and computational thinking skills, there has been an increased emphasis on problem-solving techniques. This is particularly important in encouraging students' computational thinking abilities, especially when it comes to formulating written ideas. Problem-solving involves a cognitive process that requires logical, analytical, and creative thinking to uncover solutions for specific issues. Previous research and theories have provided strong evidence that the use of problem-solving methods can significantly facilitate students' computational thinking skills, including in the context of formulating written ideas (Chevalier et al., 2020).

One noteworthy benefit of problem-solving techniques for students' computational thinking abilities is the enhancement of their analytical aptitude. As proposed by cognitive theory, problem solving requires the examination of prevalent details to attain a comprehensive of the current quandary (Kozikoglu, 2019). Research conducted by (Simanjuntak et al., 2021) demonstrates that students who regularly employ problem-solving methods exhibit superior analytical skills when constructing writing ideas and presenting supporting information. Consequently, the study concludes that problem-solving methods exert a positive influence on the development of students' analytical skills in the context of formulating writing ideas. Additionally, problem-solving techniques play a crucial role in enhancing students' ability to generate innovative and authentic solutions. Based on research by (Li et al., 2020), students who engage in problem-solving

activities tend to produce more unique and diverse writing ideas. The ability to design creative solutions is very relevant in formulating writing ideas that are interesting and different from conventional points of view. Thus, it can be concluded that problem-solving methods can stimulate students' creativity, which is then reflected in their writing ideas.

In formulating writing ideas, problem solving also helps students develop logical thinking skills. Problem solving involves logical steps in identifying problems, analyzing information, and coming up with reasonable solutions. Cognitive theory underscores the importance of logical thinking in developing cohesive concepts and arguments in writing. Research by (Toba & Noor, 2019)supports this concept by showing that students trained in problem-solving methods tend to tend to formulate writing ideas with good logical structure. Thus, problem-solving methods can be considered as an effective tool in facilitating students' logical thinking skills in formulating writing ideas. It is important to note that the positive effect of problem-solving methods in facilitating students' computational thinking skills can also be observed in aspects of cooperation and communication. Problem solving often involves group work and the exchange of ideas between students. According to Vygotsky in (Rubtsov, 2020), social interaction plays an important role in children's cognitive development. Thus, when students engage in problem-solving activities together, they not only hone their individual skills, but also improve their ability to collaborate and communicate well. Research by (Alsaleh, 2020) confirms that students who participate in problem-solving methods have a better level of communication and can support each other in formulating their writing ideas.

The success of problem-solving methods in facilitating students' computational thinking skills is also related to the implementation of technology in the learning process. In today's digital age, problem-solving methods can be improved using various technological tools and applications. Research by (Berikan & Özdemir, 2020) shows that the application of technology in problem-solving activities can help

students develop their computational thinking in a more holistic way. Therefore, to support the effectiveness of problem-solving methods in facilitating students' computational thinking skills in formulating written ideas, technology integration is an important aspect in the learning context. Nevertheless, it should be recognized that the implementation of problem-solving methods in the context of formulating written ideas also faces several challenges. One of the key challenges is the need to train teachers in designing and managing relevant and meaningful problem-solving activities. Well-trained teachers can guide students through the problem-solving process in ways that support their computational thinking development. Therefore, the development of training programs for teachers is a critical aspect in improving the effectiveness of problem-solving methods in learning to formulate writing ideas.

In overcoming these challenges, it is important to enhance collaboration between different schools and students to create a learning environment that supports the development of students' computational thinking skills in formulating writing ideas. In conclusion, problem-solving methods have a positive impact in facilitating students' computational thinking skills, especially in formulating written ideas. The results of previous research and theories show that this method can improve students' analytical skills, creativity, logical thinking, and ability to communicate and work together. Although faced with several challenges, the positive potential of problem-solving methods can be optimized through good teacher training, support from various stakeholders, and technology integration. Therefore, the development and implementation of problem-solving methods in the context of formulating writing ideas is a strategic step in preparing students to face the demands of an increasingly complex and changing world.

Problem-solving Methods facilates students' organization of information, and development of detailed descriptions in their written work

The use of problem-solving methods has been shown to play a crucial role in facilitating students in

organizing information and developing detailed descriptions in their writing. As a foundation, problem solving involves analytical and logical processes, which inherently support the systematic structuring of information. Previous research and theories highlight the positive impact of problem-solving methods on students' ability to manage information and present it in detail in the context of writing. One of the significant contributions of problem-solving methods to the organization of student information is the development of analytical skills. The problem-solving process requires identification, analysis, and in-depth understanding of relevant information. According to research by (Sari et al., 2021), students who are accustomed to using problem-solving methods have better analytical skills in detailing information that supports their writing. Therefore, it can be concluded that problem-solving methods play a role as catalysts in the development of students' analytical skills, which directly support the effective organization of information in writing.

In addition to analytical skills, problem-solving methods also contribute to the development of students' ability to structure ideas and information in a structured manner. The problem-solving process involves systematic steps in reaching a solution, which requires organizing information in an orderly and coherent manner. The results of research by (Roderick, 2019) show that students who are trained in problem-solving methods tend to have better information organization skills in the context of writing. Thus, problem-solving methods can be considered as a foundation for the development of students' information organization abilities in formulating their writings.

Problem-solving methods also play an important role in stimulating students' ability to develop detailed descriptions. The analytical process inherent in problem solving helps students see details and nuances of information that might otherwise be missed. Based on research by (van Hooijdonk et al., 2020), students who engage in problem-solving activities tend to produce more complete and in-depth descriptions in their writing.Click or tap here to enter text. Therefore, it can be concluded that problem-solving

methods can be a determining factor in the development of students' ability to present information in detail in the context of writing. It is important to note that the success of problem-solving methods in facilitating the organization of information and the development of detailed descriptions of students can also be strengthened through a collaborative approach. Problem solving often involves cooperation between students, which can enrich their understanding of information and broaden their point of view. According to Vygotsky in (Rubtsov, 2020), social interaction favors cognitive development, and therefore, solving problems together can improve students' ability to organize information and develop more comprehensive descriptions in their writing.

In addition, the use of technology in problem-solving methods can be a key driver in supporting the organization of information and the development of detailed descriptions. Research by (Koehler & Vilarinho-Pereira, 2023) suggests that the integration of technology in problem-solving activities can expand students' access to information resources and analytical tools. Thus, technology can increase the effectiveness of problem-solving methods in helping students manage information and produce richer descriptions of content. Although problem-solving methods bring several benefits, certain challenges also need to be overcome to maximize their potential. One of the key challenges is ensuring that teachers have a deep understanding of the implementation of these methods in the context of learning. Good teacher training is needed to ensure that they can direct students effectively in using problem-solving methods in their writing. Therefore, the support of educational institutions and the government in the development of teacher training programs is important to overcome this challenge.

In facing these challenges, the role of parents is also crucial in supporting students in developing information organization skills and presenting detailed descriptions in their writing. Collaboration between teachers, parents, and students can create a holistic learning environment and support the development of students' writing skills. Overall, problem-solving methods have

a positive impact in facilitating the organization of student information and the development of detailed descriptions in their writing. The results of previous research and theories provide a solid basis for recognizing the role of these methods in supporting students' ability to structure ideas and information effectively in the context of writing. Therefore, the implementation of problem-solving methods in writing learning is a strategic step in developing students' writing skills to face the demands of literacy in modern society.

V. CONCLUSION

The present research investigates the impact of problem-solving approaches on students' development of computational thinking abilities within the context of studying descriptive writing. The use of problem-solving methods in the cultivation of a systematic and rational cognitive framework among students, facilitating the formulation of ideas, organization of information, and development of detailed descriptions in their written work. The proposition suggests that incorporating computational thinking principles into writing education might be a viable strategy for equipping students with the necessary skills to thrive in a more digitized society. Several avenues for future study exist that might enhance the comprehension of the correlation between problem-solving methods and computational thinking abilities in the context of writing education. To enhance the representativeness of the study's findings, it is crucial to use a more heterogeneous sample of students, including a wider range of abilities and consider variations in student responses. Furthermore, research involving long-term monitoring can provide a deeper understanding of students' development of computational thinking skills over time.

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