



## Implementing the CIRC Learning Model Assisted by Virtual Tour Reality Media to Enhance Descriptive Text Writing Skills

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### Abstract

This study aims to examine the effectiveness of implementing the Cooperative Integrated Reading and Composition (CIRC) learning model combined with Virtual Tour Reality (VTR) media in improving the descriptive writing skills of fifth-grade students at SDN Johar Baru 15. The integration of CIRC and VTR is designed to create a collaborative and immersive learning experience, enabling students to observe objects more concretely and translate their observations into well-structured descriptive texts. This research employed a quantitative approach with a one-group pretest–posttest design. Data were collected through essay tests administered before and after the intervention, and analyzed using N-Gain to determine the level of improvement. The findings show a significant increase in students' writing skills following the implementation of CIRC supported by VTR media. This improvement is evident from the rise in average scores between the pretest and posttest, with an average N-Gain value of 0.78, categorized as high. The use of VTR provided rich and contextual visualizations that helped students produce more detailed, coherent, and accurate descriptions. Additionally, students demonstrated increased motivation and engagement throughout the learning process. These results indicate that integrating CIRC with VTR is an effective strategy for enhancing writing literacy at the elementary level and offers a relevant technological innovation that aligns with 21st-century educational demands.

**Keywords:** CIRC, Virtual Tour Reality, writing skills, descriptive text, literacy

### Abstract

Penelitian ini bertujuan untuk menguji efektivitas penerapan model pembelajaran Cooperative Integrated Reading and Composition (CIRC) yang dipadukan dengan media Virtual Tour Reality (VTR) dalam meningkatkan keterampilan menulis teks deskripsi siswa kelas V SDN Johar Baru 15. Integrasi kedua pendekatan ini dirancang untuk menghadirkan pengalaman belajar yang kolaboratif dan imersif, sehingga siswa dapat mengamati objek secara lebih konkret dan kemudian mengungkapkannya dalam bentuk tulisan deskriptif. Penelitian ini menggunakan metode kuantitatif dengan desain one-group pretest–posttest. Data dikumpulkan melalui tes esai sebelum dan sesudah perlakuan, kemudian dianalisis untuk melihat peningkatan hasil belajar dan efektivitas perlakuan menggunakan perhitungan N-Gain. Hasil penelitian menunjukkan adanya peningkatan yang signifikan pada kemampuan menulis siswa setelah mengikuti pembelajaran CIRC berbantuan VTR. Peningkatan tersebut terlihat dari perbedaan nilai rata-rata pretest dan posttest serta nilai rata-rata N-Gain sebesar 0,78 yang termasuk kategori tinggi. Media VTR dinilai mampu menyediakan visualisasi yang kaya dan kontekstual sehingga membantu siswa dalam menyusun uraian detail yang lebih runtut dan akurat. Selain itu, siswa menunjukkan motivasi belajar yang lebih baik selama proses pembelajaran berlangsung. Temuan ini menegaskan bahwa integrasi model CIRC dan VTR efektif dalam mendukung pengembangan literasi menulis di sekolah dasar dan dapat dijadikan alternatif inovatif dalam pembelajaran berbasis teknologi..

**Keywords:** CIRC, Virtual Reality Tour, writing skills, descriptive text, literacy

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## INTRODUCTION

The era of globalization has had a major impact on various aspects of life in Indonesia, especially in the field of education. Education is the most important investment for developing countries such as Indonesia (Aminuddin et al., 2021). Education in Indonesia faces significant challenges in meeting the skills needs of the 21st century, in line with global trends in education (Jaya et al., 2023). Education in Indonesia plays a crucial role in national development, but still faces a number of challenges in terms of access, quality, and relevance. The Merdeka Curriculum focuses on developing 21st-century skills, such as character, creativity, and critical thinking skills needed to face global dynamics (Arifin & Mu'id, 2024). With this policy, it is hoped that students will be able to develop their maximum potential through adaptive and future-oriented learning, while strengthening the role of schools in shaping a generation with character and competence. Literacy, numeracy, and science are the skills emphasized in this curriculum, which are in line with the learning outcomes for each subject. Education in Indonesia at the elementary school level, especially in Indonesian language learning in grade 5, emphasizes the development of basic literacy skills as an effort to build the nation in the field of education (Muthohar et al., 2024).

Writing skills are one of the literacy skills that students need to master from elementary school onwards. Writing descriptive texts, which involves the ability to describe objects or events in detail and in an interesting way, is a challenge for students. Describing the *local wisdom* of the National Monument in DKI Jakarta will certainly make it easier for students to compose texts. Culture-based education has great potential in strengthening students' understanding of their cultural heritage and promoting cultural diversity (Zahrika, 2023). Research studies on conventional learning show that conventional learning is often ineffective in improving these skills, mainly due to the lack of active student involvement in the learning process and the limited creativity of students (Fajra et al., 2023). Therefore, an innovative learning approach that combines technology with a collaborative learning model is essential.

One approach that has proven effective in text writing is the Cooperative Integrated Reading and Composition (CIRC) learning model. This model is ideal for improving problem-solving skills, especially reading and writing, through structured group work, thereby creating active and collaborative learning (Purwanti, 2024). Previous studies have revealed that the CIRC model can significantly improve students' writing skills compared to conventional methods (Simanjuntak, 2019). This method emphasizes collaboration in small groups, where students learn to understand and compose descriptive texts through discussion and structured task sharing. With the CIRC approach, students not only practice writing but also develop critical thinking and cooperation skills. They learn to express ideas and descriptions comprehensively and accurately, which in turn can improve the quality of their writing and their understanding of descriptive elements (Ratnasari & Adiwijaya, 2023).

In line with technological developments, the use of Virtual Reality (VR)-based media in education is gaining attention (Nur et al., 2024). Digital technology needs to be applied in education with the aim of optimizing student understanding and overcoming the limitations of the senses, space, and time (Fitriya, 2022). The use of technology in learning is not only intended to improve the efficiency of the teaching and learning process, but also to help students develop relevant 21st-century skills (Rahayu, 2024). Additionally, *virtual tour reality* media allows students to explore various places or objects virtually, providing an authentic learning experience, as if they were physically present at the described location (Iasha, 2023). *Virtual tour reality*, as a form of VR application, can provide a more contextual, in-depth, and interactive learning experience in the process of learning to write descriptive texts. In line with the CIRC learning model, the 21st century also prioritizes learning that is dominated by digitalization and technology. One technology that has attracted attention in the world of education is *Virtual Tour Reality* (VTR) media, which allows students to experience learning that is close to reality through visual simulations. This media is not only interesting but also

effective in increasing student engagement in the learning process, especially in terms of critical thinking and writing skills.

While most previous studies have focused on the use of VR technology in other subjects such as science or cultural arts (Lase, 2019), this study provides a specific focus on literacy skills, particularly descriptive writing skills. In addition, this study is also designed to provide empirical evidence that can serve as a basis for the development of technology-based curricula in the future. In this context, the integration of the CIRC learning model with virtual reality tour media has great potential to improve students' descriptive writing skills. In addition to providing a solution to the limitations of conventional learning methods, this combination also creates technology-based learning that is relevant to the needs of today's digital generation. This study offers a new contribution by combining two innovative approaches, namely the CIRC learning model and virtual tour reality media, which have not been studied in depth in academic literature. By combining CIRC and *Virtual Tour Reality* media, it is hoped that students can experience a more realistic learning experience and motivate them to write descriptive texts.

Therefore, the purpose of this study is to test the effectiveness of implementing the CIRC learning model assisted by virtual tour reality media in improving the descriptive text writing skills of fifth-grade students. This study is expected to make a significant contribution to the development of technology-based learning methods to improve the quality of basic education.

In practice, the benefits of this research can be measured by the improvement in students' reading comprehension and writing composition skills. With empirical evidence of the effectiveness of this model, it is hoped that the results of this study can contribute to the development of innovative, interactive learning methods that are tailored to the needs of students in the digital age.

## RESEARCH METHOD

This research was conducted in Class VA of SDN Johar Baru 15 in Indonesian language lessons, specifically on the subject of descriptive writing, with the learning outcome being that students are able to use linguistic and literary rules to write texts in accordance with the context and socio-cultural norms. The research method used was quantitative with a pre-experiment to evaluate the effectiveness of implementing the *Cooperative Integrated Reading and Composition* (CIRC) learning model assisted by Virtual Tour Reality media on descriptive text writing skills.

The research design used was a one-group pretest-posttest design, which allowed for the measurement of student learning outcomes before and after the treatment without involving a comparison group. The research population consisted of all 26 students in class VA at SDN Johar Baru 15 in the 2024/2025 academic year.

The research procedures used included Preparation: Creating a CIRC-based Lesson Plan (RPP) utilizing VTR media; Pretest: Students completed questions to measure their initial abilities; Intervention: Learning was carried out using the six main steps of the CIRC model combined with VTR ( ); Posttest: Students completed the same questions to measure their improvement in ability; Data Analysis: Data were analyzed using a t-test to evaluate the effectiveness of the treatment. The independent variable in this study was the CIRC (*Cooperative Integrated Reading and Composition*) learning model assisted by *Virtual Tour Reality* media. The dependent variable in this study was students' descriptive writing skills.

Learning activities using the CIRC (*Cooperative Integrated Reading and Composition*) learning model assisted by *Virtual Tour Reality* media were conducted face-to-face in the classroom. Before learning began, students worked on a pretest, then after learning, students worked on a posttest. The pretest questions had the same grid and evaluation questions as the posttest. The test instruments provided had undergone a trial phase and analysis was carried

out to determine the validity, reliability, level of difficulty, and discriminating power of the test instruments.

Data collection was carried out using documentation and tests. The instruments used were lesson plans, *pretest* and *posttest* questions. The research data was analyzed using parametric statistics, namely the t-test. The ability to write descriptive texts was measured using essay tests. The assessment indicators for writing descriptive texts refer to Burhan's (2010) assessment, namely: (1) Content of ideas presented, (2) Organization of content, (3) Grammatical structure, (4) Style: choice of structure and diction, (5) Spelling and punctuation.

## RESULTS AND DISCUSSION

The pretest questions were given to students before the lesson. These questions were used to measure their ability to write descriptive texts before the lesson material was presented. After the pretest, the teacher conducted the lesson. The lesson used the CIRC learning model with the aid of VTR media. The expository learning in this study was a lesson in which the teacher explained the material and example questions, then gave the students practice questions to work on. After four lessons, students were given a post-test. The pre-test and post-test questions were first tested for validity, reliability, discriminating power, and level of difficulty. The *pre-test* and *post-test* data were processed using SPSS to determine the N-Gain values, which are shown in Table 1.

**Table 1. Summary of the Average N-Gain in Descriptive Text Writing Ability for Grade V**

Criteria	Number of Students	Highest Score	Lowest Score	Average Score	N-Gain
Pre-test	26	85	55	67.8	
Post test	26	100	85	92.4	0.78

Table 1 shows the Indonesian language scores for descriptive text writing using the CIRC learning model assisted by *Virtual Tour Reality* media. The highest pretest score was 85 and the lowest was 55, while the highest posttest score was 100 and the lowest was 85. The average pretest score was 67.8 and the average posttest score was 92.4. Then, an N-Gain of 0.78 was found. Thus, it can be seen that there was an increase in the average score after the implementation of the CIRC learning model assisted by *Virtual Tour Reality* media in Indonesian language learning on the subject of descriptive text writing, proving that it can improve learning outcomes.



**Graph 1. Average N-Gain Results for Grade V Descriptive Text Writing Skills**

Graph 1 illustrates the comparison of the average pretest and posttest scores of students, as well as the N-Gain scores generated from the study. The average pretest score of students was recorded at 67.8, indicating their initial ability before the application of the **Cooperative Integrated Reading and Composition (CIRC)** learning model assisted by **Virtual Tour Reality (VTR)** media. After the intervention, the average posttest score increased significantly to 92.4, reflecting an improvement in students' descriptive text writing skills. The N-Gain score of 0.78 indicates a high increase in learning effectiveness. These results show that the use of the CIRC model with VTR media substantially improves students' writing skills and has a positive impact on the learning process.

The application of the CIRC model assisted by *Virtual Tour Reality* media in the Indonesian language learning process for descriptive text writing was in accordance with the syntactic and learning conditions in the classroom.

Step 1: introduction and forming heterogeneous groups



**Figure 1. The teacher conducts an orientation**

In the preliminary activity, students are given stimulating questions and then divided into heterogeneous groups to discuss local wisdom as material for writing descriptive texts. It is important for teachers to provide orientation before learning begins in order to prepare students mentally and emotionally for the learning process. This orientation helps students understand the learning objectives, what they will learn, and how the learning process and activities will take place. Thus, students have a clear picture and can focus their attention on relevant matters during learning. In addition, orientation also serves to arouse students' interest and motivation, create a conducive atmosphere, and reduce confusion or anxiety that may arise. Through good orientation, teachers can build a strong foundation to start learning more effectively and purposefully.

Step 2: Provide a *virtual reality tour* related to the learning topic



**Figure 2. Students watching the *Virtual Reality Tour***

After students are oriented to the problem, the second stage is for the teacher to invite students to watch a *Virtual Reality Tour* video in the form of local wisdom, namely the National Monument (Monas). Through this media, students can explore various places and concepts visually and interactively, which are not always directly accessible (Putra et al., 2024). Virtual Reality Tour provides an experience that is close to reality, allowing students to understand the material in a more in-depth and interesting way (Sukmawati et al., 2022). In addition, this method can increase student engagement in learning, because they are more motivated and enthusiastic when learning through immersive visual experiences. By paying attention to the presentation, students can also develop critical and analytical thinking skills, as they are faced with various situations and information that need to be interpreted. Overall, the use of Virtual Reality Tours can enrich the learning process and help students understand the material in a more effective and enjoyable way (Septia, 2024).

Step 3: Students work in teams to begin drafting their writing framework on the worksheet



**Figure 3. Students work in teams while the teacher guides each group**

Students discuss the given problems in groups. Each student in the group is assigned a task. At this stage, the teacher can guide the group in solving the problems. The application of the CIRC learning model assisted by VTR provides opportunities for students to work together in groups, discuss, and present their work (Nurhani, 2023). Working in teams plays an important role in the learning process of students, because through this cooperation, students can exchange ideas, discuss solutions, and build essential social skills such as communication, collaboration, and empathy. In this context, teachers act as mentors who facilitate each group, ensuring that group dynamics run smoothly and that each member contributes actively. With the guidance of teachers, students can be more focused in achieving group goals and receive assistance when facing challenges or difficulties in completing tasks. In addition, teachers can also provide constructive feedback, which not only improves the team's work results but also develops individual abilities in working collectively. Through proper guidance, the experience of working in a team becomes more meaningful and has a positive impact on the students' learning process. This is in line with constructivist learning theory, which emphasizes the importance of social interaction in learning.

#### Step 4: Presenting the team's work



**Figure 4. Students in groups presenting the results of their group discussions**

Next, students present the results of their group discussions. At this stage, students present the contents of the *Virtual Reality Tour* and how to write descriptive texts. At this stage, students can also show their enthusiasm in expressing their opinions. Presenting team work results plays an important role in the learning process, especially in improving various student skills. Through this activity, students can develop communication skills by learning to convey ideas and information clearly and structurally, while also increasing their confidence in speaking in public. In addition, presentations encourage a deeper understanding of the material, as students need to master the topic in order to explain it to others. This activity also fosters teamwork, where each member shares roles and responsibilities to ensure that the work results can be presented well. Not only that, discussions during the presentation provide an opportunity for students to hone their critical thinking, especially when receiving and responding to questions or feedback from the audience.

#### Step 5: Making conclusions



**Figure 5. Students and teachers drawing conclusions**

After all groups have presented the results of their discussions, all students and teachers draw conclusions. At this stage, they not only compile conclusions but also make evaluations so that students know the shortcomings of their work. Conclusions at the end of learning are very important for both parties, teachers and students. For teachers, these conclusions are the last opportunity to summarize the essence of the material that has been delivered during learning. This helps teachers to ensure that the main messages have been clearly conveyed and that students have gained a deep understanding. In addition, conclusions can also remind students of the learning objectives that have been achieved and the relevance of the material in a broader context. For students, the conclusion serves as a moment of reflection to evaluate their own understanding of the material and assess the extent to which they have achieved the learning objectives. Thus, the conclusion not only closes the lesson well, but also enhances the overall impression of the importance of the teaching and learning process.

#### Step 6: Reflect and close the learning activity



**Figure 6. Students and teachers reflecting on the learning activity**

At this stage, students and teachers reflect on and conclude the Indonesian language learning activity on writing descriptive texts using the CIRC learning model assisted by *Virtual Reality Tours*. Based on the research conducted, there was an increase in students' descriptive text writing results through the implementation of the CIRC learning model assisted by *Virtual Reality Tour* media. This is in line with the study " that collaborative-based learning such as CIRC supported by technology can increase student motivation and participation. Thus, this research is not only relevant to the development of learning theory but also applicable to support educational transformation in the digital era.

## CONCLUSION AND RECOMMENDATIONS

Based on the results of the research and discussion, it can be concluded that learning Indonesian language material on writing descriptive texts using the CIRC learning model assisted by *Virtual Reality* media can have a positive effect on the learning outcomes of fifth-grade students at SDN Johar Baru 15 in writing descriptive texts. Judging from the average post-test results, students experienced an increase from 67.8 to 92.4. In addition, students were more motivated in learning because it was in line with their learning styles and the use of the latest technology in the classroom, such as *Virtual Tour Reality*. With this, the CIRC learning model based on *Virtual Tour Reality* is recommended for teachers to be applied to learning materials for writing descriptive texts. Furthermore, suggestions for further research are as follows: Teachers are advised to integrate technology such as VTR into learning to increase student motivation; Further research can be conducted by involving a comparison group to

strengthen the validity of the findings; The development of other VR-based learning media needs to be explored for various subject materials.

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