



Transformation of the CIRC Learning Model Assisted by Google Sites: A Study of Development and Practicality

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ABSTRACT

This study aims to develop a Cooperative Integrated Reading and Composition (CIRC) learning model supported by Google Sites, proven to be practical in enhancing literacy skills among junior high school students. The research employed a Research and Development (R&D) methodology using the ADDIE model (Analyze, Design, Develop, Implement, Evaluate). The research subjects included teachers and students representing three literacy proficiency levels (low, medium, and high) in Majene Regency. The practicality of the model was assessed through implementation observations and response questionnaires administered to both teachers and students. Limited testing revealed an implementation rate of 89% (categorized as highly practical), with response scores of 77.40 (students) and 79.80 (teachers). In the extended trial, the implementation rate reached 96.82%, with response scores of 77.54 (students) and 85.43 (teachers). These findings indicate that the Google Sites-assisted CIRC model is highly practical for classroom use and significantly contributes to the development of technology-based pedagogical practices, particularly in improving students' reading and writing literacy. This study reinforces the role of technology in promoting interactive, collaborative, and contextual learning in Indonesian language and literature education.

Keywords: CIRC; reading and writing literacy; Google Sites.

INTRODUCTION

In the 21st century, literacy skills are essential competencies that every individual must possess to face life's challenges and phenomena. Literacy enables a person to have broad insights, critical thinking skills, proficiency in processing and understanding information, as well as the ability to write and articulate words effectively. According to Law Number 3 of 2017 on the book system, Article 1 defines literacy as the ability to critically interpret information so that everyone can access science and technology as an effort to improve their quality of life (Kemendikbud, 2017). UNESCO (2025), in a slightly different version focusing more on literacy activities, defines literacy as the ability to identify, understand, interpret, create, communicate, and compute using printed and written materials in various contexts.

From these two definitions of literacy, it can be concluded that literacy essentially involves a continuous learning process enabling individuals to achieve goals, develop knowledge and potential, and fully participate in broader communities and societies. Generally, literacy also includes numeracy skills, which involve the ability to perform simple arithmetic calculations.

Literacy skills empower and enhance the quality of life for individuals, families, and society. Literacy has a multi-effect nature, exerting broad impacts across various life domains. For example, it helps reduce poverty, lower child mortality rates, control population growth, ensure sustainable development, and promote peace (Hasanah & Silitonga, 2020). This aligns with UNESCO's (2025) statement that "Literacy empowers and liberates people. Beyond its importance as part of the right to education, literacy improves lives by expanding capabilities which in turn reduces poverty, increases participation in the labour market and has positive effects on health and sustainable development. Women empowered by literacy have a positive ripple effect on all aspects of development. They have greater life choices for themselves and an immediate impact on the health and education of their families, and in particular, the education of girl children."

There are six basic literacy skills that a nation must possess to excel and compete globally in the 21st century. These basic literacies are (1) reading and writing literacy, (2) science literacy, (3) numeracy literacy, (4) digital literacy, (5) financial literacy, and (6) cultural and civic literacy (GLN Team, 2017). The foundation of all these literacies is reading and writing literacy. This is because mastery of reading and writing is the gateway to acquiring other literacy skills. With reading and writing abilities, individuals can navigate life more effectively by solving standard problems they encounter. Knowledge gained through reading and writing literacy helps them find solutions to various life challenges. Therefore, the primary priority in literacy programs is to ensure that all citizens possess strong reading and writing skills through diverse efforts.

Since 2016, the Indonesian government, through the Ministry of Education and Culture, has promoted the National Literacy Movement to reduce poverty, as implemented in the Ministry of Education and Culture Regulation Number 23 of 2015 on Character Development. However, after approximately nine years of implementation, the results of this movement have yet to meet expectations. This is evident from surveys conducted by various international survey institutions, such as the OECD's Programme for International Student Assessment (PISA), which evaluates the reading, mathematics, and science abilities of 15-year-old students in participating countries, including Indonesia. The 2022 results showed Indonesia's literacy score at 359 points, lower than the 2018 score of 371 (OECD, 2022). This is the lowest score in Indonesia's history of participating in PISA since 2000. Further data supporting the low literacy ability of Indonesian children come from the National Assessment conducted by the Ministry of Education, Culture, Research, and Technology in 2021, released in 2022, which nationally revealed that students' literacy learning outcomes fall below the minimum competency standards for reading literacy (BSKAP – Kemendikbudristek, 2022).

This literacy condition among 15-year-old Indonesian students is also reflected in Majene Regency. The Majene Education Report Card indicates that junior high school students' reading literacy achievement is the lowest indicator, with less than 35.56% meeting the minimum competency standard (Source: National Assessment 2023). This is a concerning issue because reading literacy is a fundamental skill that every individual must master.

Based on the above description, improvements are necessary in strengthening literacy skills in Indonesia. According to Ervin Reliavirli Rusti (2023), factors contributing to students' low literacy skills include: (1) low reading interest, (2) insufficient facilities and infrastructure, (3) lack of reading encouragement within



families, (4) influence of mobile phones and television, and (5) teachers not maximizing appropriate instructional models in reading instruction. Among these factors, the teacher's role in classroom management and the use of suitable learning models is pivotal in achieving optimal literacy mastery, particularly reading and writing literacy. Teachers serve as directors of the learning process, deciding the instructional model used, managing activities, nurturing students' strengths, and minimizing weaknesses, thereby addressing internal and external challenges affecting learning outcomes.

A learning model is a systematic conceptual framework used to design and implement instruction, serving as a guideline for teachers in planning and conducting learning activities. Joyce, Weil, and Calhoun (2023) define a learning model as a systematic framework illustrating a structured learning process, encompassing objectives, syntax (stages), social principles, support systems, instructional effects, and nurturant effects, based on tested learning theories. Learning models describe the learning environment, including teacher behaviors during model implementation (Sakti, Jufri, Gani, & Djumingin, 2021). Similarly, Arends (2022) states that a learning model is a comprehensive plan or pattern used to organize teaching and guide classroom instructional planning, including syntax (steps), social systems, reaction principles, and support systems.

Considering these definitions, it can be concluded that a teacher aiming to conduct directed and systematic learning to maximize learning objectives must be capable of designing or selecting an appropriate learning model based on learning goals, material content, student characteristics, learning environment, available facilities, teacher competence in applying the model, available time, student engagement, and activities allowing formative and summative assessments to measure learning outcomes.

One learning model recommended by many experts and researchers as highly effective and efficient in reading and writing instruction, especially in the 4.0 era, with characteristics of independence and collaboration, is the Cooperative Integrated Reading and Composition (CIRC) model. According to Niliawati, Hermawan, and Riyadi (2018), this model integratively helps students develop reading and writing skills simultaneously in one learning process. R.E. Slavin (2022) explains that the CIRC model is a cooperative learning model that integrates reading, writing, and small-group discussion activities to improve students' literacy comprehension.

Several studies demonstrate the effectiveness of the CIRC model in enhancing student learning outcomes, particularly in reading and writing. Among them are studies by Ainun Jariah, Rina Gustina, Sintayana Muhandini, Habiburrahman, Baiq Yuliatin Ihsani, and Nurmiwati, which show that the use of the CIRC model in reading comprehension learning significantly improves learning outcomes (Jariah et al., 2023). Research by Kesumadewi et al. (2020) also supports the use of cooperative CIRC models, highlighting its ideal suitability for improving students' problem-solving skills. The CIRC model requires students to simultaneously comprehend discourse content and develop writing skills.

Despite evidence supporting the CIRC model's effectiveness in enhancing reading and writing skills, there is a lack of research integrating technology as a learning media, especially in junior high school literacy learning contexts. In today's digital era, students at all educational levels are closely connected with technology, which they use in almost all daily activities. Teachers aiming for successful learning processes must skillfully leverage these technological trends. A 2018 PISA study on the impact of technology use in learning on students' reading scores found that students with similar

socioeconomic status perform better in reading—equivalent to over one year of schooling—when they use ICT productively in learning. For example, students using the internet to read news or search for information scored approximately 40 points higher than peers of similar socioeconomic status who did not use the internet (OECD, 2019).

One free and user-friendly technological medium for learning is Google Sites, a website creation platform developed by Google as part of Google Workspace (formerly G Suite). This tool allows users to create and publish websites with a drag-and-drop interface without requiring programming knowledge. Google Sites integrates with Google Workspace services (e.g., Google Docs, Sheets, Drive, Calendar), facilitating team collaboration in content development (Google, 2024). In the context of learning media, Harsanto (2012) notes that Google Sites can enhance the learning process by: 1) uploading course materials so students no longer need to copy files via flash drives, which can be inconvenient and virus-prone; 2) storing syllabi; 3) assigning tasks; 4) announcing information; and 5) enabling students to download or view assignments.

Utilizing Google Sites in learning not only aids teachers in designing engaging and interactive lessons but also enriches students' learning experiences. It allows flexible learning both inside and outside the classroom, providing space for collaboration, exploration of learning resources, and publication of students' work. Within the CIRC model context, Google Sites strengthens the integration of reading and writing activities through digital media that support critical, creative, and collaborative thinking. This is corroborated by research conducted by Sri Wahyuni, Andan Yani, Dadan Rosana, Insih Wilujeng, and Sabar Nurohman (2024), titled "Improving Students' Critical Thinking Skills Through the Use of PBL-Based Google Sites Learning Media and Review Students' Collaboration Skills," which found that project-based learning (PBL) media using Google Sites significantly enhances critical thinking and collaborative skills among junior high school students in SMP Negeri 11 Yogyakarta. The researchers explained that reading and writing interactions on Google Sites-based blogs/websites stimulate discussion, reflection, and evaluation, thus reinforcing the integration of literacy competencies and higher-order thinking.

Similarly, Wachid, Nadzirah, and Chairiyah (2022), in their study titled "Development of Google Sites Application as a Strengthening Medium for Thematic Literacy Learning of Grade IV Students at SDN 3 Karanganyar," demonstrated that Google Sites supports the development of reading and writing literacy in elementary students.

Based on these issues and facts, this study innovates by developing the CIRC learning model integrated with technology-based learning media—Google Sites—and tests its practicality under the title: "Transformation of the CIRC Learning Model Assisted by Google Sites: A Development and Practicality Study."

METHOD

The type of research employed in this study is development research (Research and Development), using the ADDIE model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation (Rayanto & Sugianti, 2020). At each stage, evaluations and revisions were continuously carried out to ensure that the final product would be as optimal and aligned with the needs as possible.

The trial subjects in this study were teachers and seventh-grade junior high school students (Phase D) from several schools representing a range of literacy abilities



(low, medium, and high) in Majene Regency. The sampling technique used was stratified random sampling, in which the population was divided into several strata, and samples were randomly selected from each stratum.

The instruments used for data collection included: interview instruments to gather data on teachers’ needs for an integrated reading and writing instructional model; questionnaires to collect data on students’ needs in reading and writing instruction; instruments for validating the model and its supporting components; teacher and student response questionnaires to assess the practicality of the developed model; observation sheets used by observers as a guide to assess practicality during the implementation process; and field notes used to document any events or experiences of students and teachers during the literacy learning process using the CIRC model supported by Google Sites that were not captured in the observation sheets.

The collected data were analyzed using both qualitative and quantitative descriptive analysis techniques. Qualitative data were analyzed using the interactive data analysis model by Miles and Huberman, as cited by Sugiyono, which consists of three stages: data reduction, data display, and verification (2022, pp. 249–252). Quantitative data were analyzed based on Trianto’s (2009) criteria for assessing the practicality of a developed model, which states that a model is considered practical if: (1) experts and practitioners affirm its applicability, and (2) real-world application demonstrates that it can indeed be implemented (Parenta, 2020, p. 97).

The steps in analyzing the implementation data of the instructional tools are as follows:

- 1) Calculate the total mean score (X) using the formula:

$$\bar{X} = \frac{\sum_{i=1}^n A_t}{n}$$

At where:

- X : Total mean score
- A_t : Mean score for the ith aspect
- N : Number of aspects

- 2) Determine the implementation category for each aspect or for all aspects overall by matching each aspect’s mean score (A_t) or the total mean score (X) to the pre-established categories.

Based on the average percentage of the practicality observation sheets from two evaluators/experts, the model’s practicality was interpreted using the following table:

Table 1. Interpretation Criteria for Product Practicality

Category	Percentage (%)
Very Practical	80 < N ≤ 100
Practical	60 < N ≤ 80
Quite Practical	40 < N ≤ 60
Less practical	20 < N ≤ 40
Not Practical	0 < N ≤ 20

Source: Mawarinda et al., 2022

The procedural steps in developing the Google Sites-assisted Cooperative Integrated Reading and Composition (CIRC) learning model to strengthen students’ reading and writing literacy skills are as follows: (1) **Analysis Stage:** This involved conducting needs analysis and task analysis; (2) **Design Stage:** A systematic process

involving conceptual and content design for the product. Drafts were written for each content component, with clear and detailed guidelines for implementation. The design at this stage remained conceptual, forming the basis for the next phase; (3) **Development Stage:** At this stage, the conceptual design was translated into a real product. The developed product underwent both content and construct validation. Suggestions from experts/validators were used to revise the product design. Instruments were also created to measure product performance; (4) **Implementation Stage:** The validated product was implemented in real classroom settings. Practicality testing was conducted in two phases—limited and expanded trials. Data were collected through observation sheets (assessed by two observers using a Likert scale) and response questionnaires distributed to teachers and students. The collected data were analyzed to determine the average implementation and practicality scores, then interpreted using predefined practicality criteria; (5) **Evaluation Stage:** Feedback was provided to improve the developed product based on the evaluation results or unmet needs, leading to further revisions.

The product testing was carried out in two stages: a limited trial and an expanded trial. In the limited trial, three schools participated, involving 86 student subjects. In the expanded trial, six schools were involved with a total of 169 student subjects. Each product test at every stage was conducted over two learning sessions.

RESULTS AND DISCUSSION

This study aimed to develop a practical Cooperative Integrated Reading and Composition (CIRC) learning model supported by Google Sites to improve the reading and writing literacy skills of junior high school students in Majene Regency. The findings show that the developed model is highly valid, as confirmed by expert validators, including learning model development experts, subject matter experts, and instructional media experts. The average model validity score was 4.5 on a scale of 1 to 5. The learning tools (teaching modules and Google Sites media) and supporting instruments (observation sheets, questionnaires, and learning outcome tests) also received scores categorized as "very valid."

In terms of practicality, the implementation of the CIRC model supported by Google Sites in the classroom demonstrated a high degree of practicality, both based on observer evaluations of the learning process and responses from teachers and students collected through questionnaires. These findings confirm that the developed model can be applied effectively and efficiently within the context of literacy instruction for junior high school students.

The following is a discussion of the practicality of the model developed based on the data collection techniques used:

1) Practicality Based on Observation of Implementation

In the limited trial stage, the average implementation score across five learning aspects reached 89%, placing it in the "very practical" category. The highest scores were obtained in the aspects of social system and reaction principle (both at 90%). The high score in the social system indicates effective communication among students within groups. The reaction principle score reflects the teacher's role as a facilitator and consultant. This aligns with Slavin (2020), who stated that the success of the CIRC model depends on dynamic teacher-student interaction, especially in encouraging collaboration and group responsibility.

The lowest score was the support system aspect, with an average score of 88%. This score indicates that teachers and students experienced difficulties using the CIRC



learning model supported by Google Sites, particularly when students were working on student worksheets using Google Docs and assessing each other, as this was a new experience for them. A similar thing was also experienced in research conducted by Arie Eko Cahyono et al. (2022) who found that the use of Google Docs as a learning medium was still not widely used by teachers and students so that some students still found it difficult and chose to use other applications or direct learning. Sembiring and Kona (2024) also stated that effective use of digital tools and platforms, which can be time-consuming and costly, may require support and training from teachers and students. The following table shows the results of observations on product implementation during limited testing:

Table 2. Results of Observations of Product Implementation at the Limited Trial Stage

Observed Aspects	Average Implementation Score			Percentage of Implementation %		
	P1	P2		P1	P2	
Implementation of Learning Model	4.34	4.54	4.44	87%	91%	89%
Syntax						
Social System	4.31	4.63	4.47	86%	93%	90%
Reaction Principle	4.46	4.54	4.50	89%	91%	90%
Support System	4.28	4.5	4.39	86%	90%	88%
Instructional Effects and Nurturant Effects	4.28	4.61	4.45	86%	92%	89%
Average	4.33	4.56	4.45	86%	91%	89%

In the expanded trial stage, the implementation score increased to 96.82% (very practical category), indicating a significant improvement from the limited trial. This proves that product revisions made after the limited trial successfully improved implementation in the classroom. This increase in practicality is reinforced by the availability of support systems such as digital devices and internet connections, which are crucial factors in ICT-based learning (Redecker & Punie, 2017). The highest score in the support system aspect was 97.80%, indicating that the CIRC model and Google Sites are easy to use by teachers and students, including using google docs to work on LKPD. This is in line with Nelson's opinion that "you will not be good at something, unless you practice. That applies to everything in this world," so practice remembering things (Barbara, Terry, and Alistair, 2024). The lowest aspects were the social system and instructional and accompanying impacts with scores of 96.20% each. Despite its lowest score, this skill demonstrates a very good level, indicating that the CICR model, supported by google sites, socially encourages students to consciously interact. This has an instructional impact on material mastery and the achievement of learning objectives.

This is in line with the research findings of Ainun Jariyah et al. (2023), who stated that by implementing the CIRC model, teaching and learning activities, particularly in group work, become more active, responsible, meticulous, and confident, allowing less intelligent students to receive learning support from the more intelligent students in their groups. The following table shows the results of observations on the product's implementation during the extensive testing:

Table 3. Results of Observations on Product Implementation at the Expanded Trial Stage

Observed Aspects	Average Implementation Score		\bar{X}	Percentage of Implementation		\bar{X} %
	P1	P2		P1	P2	
Implementation of Learning Model	4.79	4.92	4.86	95.80%	98.40%	97.10%
Syntax						
Social System	4.73	4.89	4.81	94.60%	97.80%	96.20%
Reaction Principle	4.88	4.8	4.84	97.60%	96.00%	96.80%
Support System	4.86	4.92	4.89	97.20%	98.40%	97.80%
Instructional Effects and Nurturant Effects	4.81	4.81	4.81	96.20%	96.20%	96.20%
Average	4.81	4.87	4.84	96.28%	97.40%	96.82%

2) Practicality Based on Teacher and Student Questionnaire Responses

The questionnaire results showed that in the limited testing phase, the average practicality score according to students was 77.40 and teachers 79.80. These scores fall into the practical category. This value increased in the expanded testing phase, with scores of 77.54 from students and 85.43 from teachers. Both teacher and student response questionnaire data obtained in the limited and expanded testing indicate that the developed product falls into the practical category. The following is a table of the results of the teacher and student response questionnaire at the limited trial stage and the extensive trial stage:

Table 4. Teacher and Student Response Questionnaire Results (Limited and Expanded Trials)

Dimension	Indicator	Average Score			
		Limited Trial		Expanded Trial	
		Students	Teachers	Students	Teachers
Syntax	Attractiveness	78,40	79,00	80,47	73,33
	Novelty	75,58	80,00	77,36	76,67
	Usefulness	84,40	98,00	80,98	100,00
	Ease of Use	65,80	65,00	72,05	70,00
Learning Media	Attractiveness	79,60	83,00	78,68	85,00
	Novelty	73,20	93,00	77,75	100,00
	Usefulness	84,80	97,00	73,20	100,00
	Ease of Use	69,80	62,00	72,97	63,89
	Accuracy	85,00	100,00	81,86	100,00
Average		77,40	79,80	77,54	85,43

In the limited trial stage, the aspects with the highest scores were usefulness and media accuracy, while in the broader trial, both aspects also scored very high on the practicality aspect, with an increase in practicality in the media's novelty and usefulness aspects. This indicates that teachers and students consider the CIRC learning model integrated with Google Sites learning media to be highly relevant and supportive of achieving learning objectives. This developed product represents an innovation for teachers and students, positively impacting learning interest and motivation. These findings align with research suggesting that the use of digital technology, such as collaborative platforms, can improve efficiency, material relevance, and active student participation in literacy learning (Bond et al., 2021). This also demonstrates that the use of technology in learning plays a crucial role in developing skills such as problem-



solving, creativity, and collaboration by enhancing information processing, fostering creativity, encouraging collaboration, developing digital literacy, and supporting innovative learning methods (Sembiring and Kona, 2024).

However, ease of use remains a major challenge. Low usability scores for the syntax and media dimensions indicate that some teachers and students require additional training in operating Google Sites and Google Docs. This aligns with research by Çakıroğlu et al. (2021), which emphasized that the success of technology integration in learning depends heavily on the user's digital literacy.

Several experts argue that the practicality of a learning model is a fundamental prerequisite for its feasibility in educational contexts. Setiawan (2020) stated that there are two fatal risks that will occur if the model is impractical. First, it creates a cognitive burden for teachers, as they will spend 70% of their energy on technical adaptations. Instead of focusing on pedagogical interactions, teachers will be preoccupied with the technicalities of implementing the model in the classroom. Second, there is a disconnect between theory and practice. A theory-based model without practical testing will create a gap between curriculum planning and classroom reality. Therefore, during the product development process, researchers made revisions. The first revision followed a limited trial and the second revision followed a broader trial based on practicality data obtained in the field.

The following explains the things that are revised at each stage of product testing:

a. Revisions to the limited trial stage include: (1) **Model improvements**, especially in simplifying syntax to facilitate implementation, student and teacher activities outlined in the syntax are explained more operationally, supporting tools are adapted to the characteristics of reading learning. Schutz (2020) said that extracting the essence of the learning model will make work easier. This makes complex things easier to learn, especially for novice teachers. According to Gyamfi, Hanna, and Khosravi (2024) in their research, it was revealed that providing guidance to students can make a difference in the quality of the feedback they provide; (2) **Improvements to the teaching module**, especially in adding information to reference sources, clarifying the sources, clarifying the assessment rubric so that the assessment is more objective and valid, changing the duration of learning time because the time available to complete all learning activities so that objectives are achieved is not enough if it is only 3 x 40 minutes. This is in line with the results of Kraft & Novicof's research (2024) which concluded that schools can utilize additional time to improve student academic success. However, if time is used ineffectively or not in accordance with academic objectives, the benefits for students will be minimal; (3) **Improvement of learning media**, especially in improving the reading material link that cannot be accessed. The solution is to replace it with a PDF model so that errors do not occur again; (4) **Improvement of the observation sheet for the implementation of the model**, especially in simplifying the statement sentences so that they do not cause ambiguity, improving the order of statements according to the stages of learning activities in the model developed, improving the use of language according to Indonesian spelling. Creswell & Cresweel in Nurlina et al (2024) said that researchers must use an observation protocol because they often make many observations during the research. This method can be a single sheet of paper with a dividing line in the middle to differentiate descriptive notes, which can include participant descriptions, dialogue reconstructions, descriptions of spaces, events, and certain activities. Demographic information such as day, date, time, and location of the research can be included in the

protocol; (5) **Improvement of the teacher and student response questionnaire instruments**, especially in the use of short, concise, and clear language; (6) **Improvement of the pretest-posttest question instruments**, especially in the sentence of the question which is made clearer using good and correct sentences, easy to understand, and does not give rise to multiple interpretations so that the answers given provide an accurate picture of students' understanding of the reading content; (7) **Improvements based on observation notes during the implementation of the model in the field include teachers needing to ensure the availability of an internet network**, ensuring all students have digital devices such as mobile phones and the like, ensuring the availability of Google for Education accounts or Gmail accounts on all children's digital devices, ensuring the availability of document editing applications on children's digital devices.

b. Revisions to the extensive trial stage which include: (1) **Revisions to the syntax of the learning model**. The model syntax is made simpler to facilitate implementation; (2) **Revisions to the teaching module**, especially in the section on time allocation and collaborative reading activities in groups; (3) **Revisions to the learning media**, especially the reflection space or page, are made simpler so as not to take a long time in the process of writing the reflection results on the Google Sites learning media. It is better to provide choice options and students simply click on the option that corresponds to the results of their reflection; (4) **Revisions to the LKPD** that are adjusted to the improvements to the assignments in the teaching module.

The developed learning model was categorized as practical through the practicality test used in this study. The practicality of this model lies primarily in the ease of accessing the materials, worksheets (LKPD), and reading materials used to complete the tasks in the LKPD, as all supporting learning materials are embedded in the Google Sites learning media. This aligns with the opinion of Setiawan and Mustangin (2024), who stated that a learning model is considered practical if it can be easily used by teachers and students and supports the implementation of learning according to time and classroom conditions.

Teachers have more opportunities to interact with students and discuss subject matter because learning media supports interactive discussions. Students can learn anytime and anywhere as long as an internet connection is available. This supports the development of independent learning. This finding is supported by research by Comas Bara et al. (2024), which showed that the use of Google Sites facilitates access to learning content and increases the effectiveness of interactions between teachers and students, with a practicality level reaching 95%.

In the implementation of the Cooperative Integrated Reading and Composition learning model assisted by Google Sites, although its practicality has been tested and declared very practical, several challenges were encountered in implementing this model. **These challenges include:** (1) **Infrastructure Constraints:** Some schools lack an internet connection that can facilitate student learning using the internet. In addition, some schools also have unstable internet connections. Solution: To overcome these obstacles, a solution can be implemented by designing materials that can be accessed offline. (2) **Teacher Adaptation:** Some teachers initially had difficulty operating Google Sites. Solution: Conduct short training and step-by-step guides.



CONCLUSION

Overall, the findings of this study indicate that the **CIRC model supported by Google Sites is not only practical to use but also flexible and adaptive to various instructional contexts**. With strengthened technical support and adequate training in the use of digital media, this model has the potential to serve as a strategic alternative for integrated reading and writing literacy instruction in secondary schools.

The practicality of this model also provides evidence that technology-based learning, when designed with constructivist and cooperative approaches, can effectively address 21st-century literacy challenges, as emphasized by UNESCO (2023) in its global report on technology-driven educational transformation.

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