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Effectiveness of the Deep Learning Oriented FIVES Model in Improving Fifth Grade Elementary Students' Reading Literacy

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Abstract
This study aims to analyze the effect of the Deep Learning-oriented FIVES model on the reading literacy skills of elementary school students. This study uses the Research and Development (R&D) research method with the Borg and Gall model. The research subjects consisted of fifth-grade students of SDN Wanakerta for limited testing, and 60 fifth-grade students of SD Negeri Purwadadi II for extensive testing. The instrument used was a reading literacy ability test in the form of a pretest and posttest. Data analysis was carried out through normality tests, Mann-Whitney tests, N-Gain tests, and effect size calculations. The results showed that there was a significant difference in reading literacy skills between the experimental class and the control class after the intervention (sig. = 0.004 < 0.05). The average increase in N-Gain in the experimental class was 57.96% (quite effective category), while in the control class it was 33.38% (less effective category). The effect size calculation showed a value of r = 0.66 which is included in the large category. These findings indicate that the Deep Learning-oriented FIVES model has a significant and strong influence on improving elementary school students' reading literacy skills.

Keywords: Deep Learning; Fives Model; Reading Literacy

INTRODUCTION

Reading literacy is a crucial competency that determines students' academic success and serves as the foundation for lifelong learning. Reading literacy in primary schools is a key focus of education policy, as reading ability in primary schools correlates with long-term academic success. According to the Programme for International Student Assessment (PISA), reading literacy is the ability to understand, use, evaluate, and reflect on written texts to achieve specific goals (OECD, 2023). Therefore, reading literacy is not limited to the technical ability to identify specific words but also encompasses complex cognitive processes. As the concept of literacy has evolved, in 2018, PISA changed the term "reading" to "reading literacy." This change in terminology indicates that the quality being measured is not only the technical ability to read texts (for example, converting written symbols into sounds), but also more complex and in-depth abilities.

Elementary school reading instruction should focus on deeper understanding rather than mechanical reading skills. One of the changes in the curriculum from the 2013 curriculum to the Merdeka curriculum is the replacement of the National Examination with a National Assessment, which includes a Minimum Competency Assessment (AKM) (Masliah et al., 2023). The national

AKM states that reading literacy has three main indicators: the ability to find information (access and retrieve), the ability to interpret and integrate information (interpret and integrate), and the ability to evaluate and reflect on information (evaluate and reflect). These indicators show that reading literacy requires extraordinary thinking skills, which are in line with the demands of 21st-century learning.

However, the reading literacy achievement of students in Indonesia remains low. Based on the results of the 2022 PISA study released by the OECD, Indonesia ranked 69th out of 81 participating countries. Indonesia is in the bottom 10-15 with a score of 359, far below the OECD average of 469, down from 371 in the 2018 PISA. This condition indicates that reading literacy skills have not developed optimally. One contributing factor to this condition is reading learning practices that still tend to be oriented towards surface learning, namely learning that only emphasizes finding explicit answers in the text without encouraging the processes of analysis, evaluation, and reflection (Putrawangsa & Hasanah, 2022). As a result, reading activities have not become fully meaningful activities for students.

The deep learning approach in education has emerged as a promising pedagogical framework for transforming students' learning experiences to be more comprehensive, reflective, and in line with the needs of the 21st century (Andayanie et al., 2025). Research by (Johansz, 2025) shows that the implementation of deep learning in the curriculum has a significant impact on students' reading abilities in elementary schools. In contrast to conventional methods, deep learning emphasizes deep understanding. The main characteristics of the deep learning approach are learning that is consciously designed (mindful), meaningful (meaningful), and joyful (joyful) (Hasanah & Meivawati, 2025). For the deep learning approach to be applied in reading literacy learning, elementary school teachers need a structured and operational learning model so that the principles of deep learning do not only stop at the conceptual level, but can also be used practically in classroom learning activities (Difa Maulidya et al., 2025). One learning model that can help improve deep reading literacy is the FIVES model. The FIVES model has 5 stages, namely Fact, Inference, Vocabulary, Experiences, and Summary. (A. Sari et al., 2024). FIVES is a methodology that effectively integrates research-based methods related to reading, writing, speaking, listening, viewing, and visually representing for differentiated disciplinary literacy instruction related to genuine text and issues (Shea & Roberts, 2016). According to (Indriyani et al., 2026), elementary school students have more reflective and contextual reading literacy skills. However, the application of the FIVES model integrated with deep learning in elementary schools is still limited, indicating that more research is needed to implement a validated and empirically tested learning model.

RESEARCH METHODS

Research Design

This study uses a *Research and Development* (RnD) approach with the Borg and Gall model which aims to test the effectiveness of the FIVES learning model oriented to deep learning in improving students' reading literacy skills in elementary schools. According to Borg and Gall (1989) R&D is a process to develop and validate educational products (Torang Siregar, 2023) . The Borg and Gall development model consists of ten stages, including 1) Research and information gathering stage, 2) Planning stage, 3) Product development stage, 4) Initial trial stage, 5) Initial product revision stage, 6)

Field trial stage, 7) Product revision stage resulting from field trials, 8) Field implementation test, 9) Final product revision, 10) Dissemination and Implementation, (Fatimah et al., 2024) .

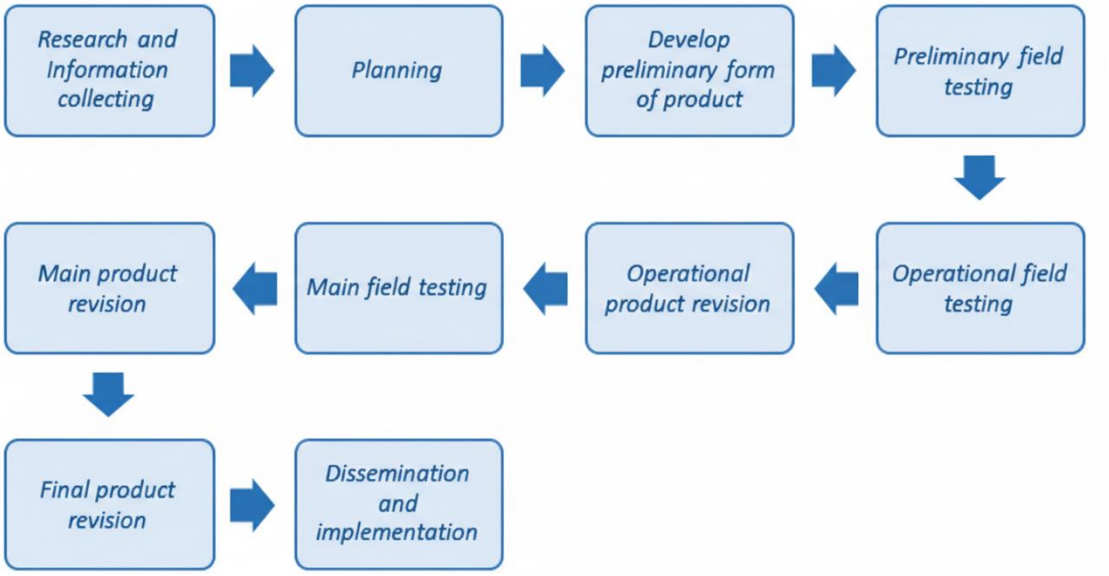

Figure 1 Borg and Gall's R&D steps

One limitation of this model is the relatively long and complex development process, which requires time, money, and effort to be carried out optimally (Ade Rahayu, 2025) . According to (Ruhansih, 2017), the research stages can be modified according to the needs and objectives of the study. Therefore, in this study, the stages will be simplified to just seven, up to the trial usage/wider trial stage.

Methodologically, the effectiveness testing phase of this study used a pretest and posttest design pattern. In the extensive field trial phase, research participants were divided into two groups. One group was an experimental class using the Deep Learning-oriented FIVES model, and the other was a control class using conventional learning methods. A pretest was administered to both groups to measure their initial reading literacy abilities, and a posttest was administered to both groups to measure their improvement after the intervention. In line with research (Arib et al., 2024) to analyze empirical data, a statistical hypothesis test was conducted to compare the posttest scores of the experimental and control groups. Hypotheses are very important for educational research. According to (Maskhuliah et al., 2025), researchers can formulate specific and measurable research questions by making clear hypotheses. In addition, according to research (Maskhuliah et al., 2025) to determine the level of improvement in student understanding in each group, an N-Gain score analysis was also conducted. The N-Gain analysis was conducted to determine the extent of improvement in learning outcomes produced by the intervention. Based on the difference in normalized pretest and posttest scores, the N-Gain test is used to determine learning effectiveness. To conduct this analysis, the N-Gain value is interpreted as a percentage. These values are then categorized as ineffective, less effective, moderately effective, and effective.

Research Target/Subject

The subjects in this study were fifth-grade elementary school students. For the limited test, the researcher used 15 students at SDN Wanakerta and for the broad test, the researcher used 60 students, including 30 students in the control class and 30 students in the experimental class at SDN Purwadadi II.

Research Procedure

The research procedure used is the Borg and Gall development model modified into seven stages, namely 1) research and information; 2) planning; 3) develop preliminary product; 4) preliminary field testing; 5) main product revision; 6) main field testing; and 7) operational product revision.

Instruments, and Data Collection Techniques

Primary data (interviews, observations, surveys, and test instruments) and secondary data (journals) are the types of data used in this study.

Data analysis technique

The data analysis in this study used a quantitative descriptive method. The Linkert scale with four levels of assessment was used to transform the data collected from the questionnaire into narrative descriptions. After that, the scores obtained from the questionnaire were processed and presented in percentage form. Then, for the data calculation method, this study used Microsoft Excel and IBM SPSS Statistics 26. Microsoft Excel was used to calculate product validity, product practicality, and teacher and student responses. For instrument testing, in addition to validation by experts, empirical testing was also conducted on the first grade level, namely grade VI of elementary school.

RESULTS AND DISCUSSION

Results

The development results in this study were implemented using a modified seven-stage Borg and Gall model. In the first stage, namely the research and information gathering stage , the researcher analyzed needs through literature reviews, learning observations, and interviews regarding students' reading abilities. The results of an interview with one of the teachers at SDN Wanakerta showed that students' reading literacy skills were still relatively low. Reading learning remained focused on finding explicit answers and tended to be teacher-centered. One of the disadvantages of teacher-centered learning is that the teacher completely controls the learning process by using one-way communication, which encourages passive learning and does not support critical thinking for most students (Suvriadi Panggabean, S.Pd. et al., 2021). Similarly, (Simbolon et al., 2025) stated that an approach that prioritizes one-way learning will not be able to hone students' critical thinking, creativity, and problem-solving skills. As a result, students are less actively involved in the learning process and are not accustomed to developing a deep understanding of the text. In addition to teacher-centered learning, the learning model used is still conventional , which causes the learning process to become monotonous, students are less enthusiastic, so that students' interest in reading literacy is low (RRNyimas Ayu Nursukowati et al., 2025) .

Based on the data collection results, the researchers then created a draft for developing a deep learning-oriented FIVES learning model. Before creating the draft, the researchers first gathered information on various aspects, such as the concept and steps of the FIVES model, the principles of deep learning, and appropriate materials for elementary school students.

In the second stage, the planning stage , researchers developed a development plan based on the results of the needs analysis (Maydiantoro, 2019) . This planning included determining the desired competencies, the research design or steps, and the possibility of limited trials. The focus of this research was the reading literacy skills of fifth-grade elementary school students. Decisions about these competencies were based on a literature review and interviews with previous teachers.

In the third stage, namely the initial product development stage (*develop preliminary form of product*), researchers developed an initial design of the FIVES learning model oriented towards deep learning based on needs analysis and literature review. The product developed is in the form of FIVES learning syntax/steps, namely, *Fact, Inference, Vocabulary, Experiences* and *Summary* integrated with the learning principles of deep learning, namely, *mindful, meaningful and joyful*. At this stage, the product was also validated by experts to ensure its usability before being piloted. Validation was conducted by lecturers acting as subject matter and media experts, and by a senior teacher experienced in elementary school learning acting as a practitioner expert. The results of the expert validation can be seen in Table 1.

Table 1 Summary Results of Expert and Practitioner Validation

Draft of the FIVES Learning Model	Va	Vp	Results	Category
Revision 1				
Model	78.57%	82.14%	80.36%	Worthy (minor revision)
Teaching Module	76.04%	84.38%	80.20%	Worthy (minor revision)
Teaching materials	76.47%	83.82%	80.14%	Worthy (minor revision)
			Revision 2	
Model	82.14%	88.10%	85.12%	Very Good (no revision needed)
Teaching Module	85.42%	90.63%	88.02%	Very Good (no revision needed)
Teaching materials	80.88%	88.24%	84.55%	Very Good (no revision needed)

Information:
Va: Expert Validation
Vp: Practitioner Validation

Next, in the fourth stage, namely the preliminary *field testing stage*. The validated model was tested on a limited group of 15 fifth-grade elementary school students. Before the learning began, students were given a pretest, the purpose of this stage was to measure their initial reading abilities. Then, after the learning activities were completed, students worked on posttest questions to determine the improvement in reading literacy skills. The results of data analysis at the limited field testing stage showed that the normality test using Shapiro-Wilk was carried out with a sample size of less than 50 students. The pretest score showed a significance value of 0.047 < 0.05, which indicated that the data were not normally distributed, while the posttest score showed a significance value of 0.096>0.05, which indicated that the data were normally distributed. Because the pretest data were not normally distributed, it was continued with the nonparametric Wilcoxon Signed Ranks. The significance value of p = 0.000 (p <0.05) indicates that $H0_{is}$ rejected and $H\alpha_{is}$ accepted. These findings indicate that there is a difference between reading literacy skills before and after the test.

Table 2 Normality of Reading Literacy

Tests of Normality

	Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Statistics	df	Sig.	Statistics	df	Sig.
Pretest	.246	15	.015	.880	15	.047
Posttest	.227	15	.037	.900	15	.096

Table 3 Wilcoxon Nonparametric Test of Reading Literacy

Test Statistics [a]

	Posttest - Pretest
Z	-3.502 [b]
Asymp. Sig. (2-tailed)	.000

To determine the effectiveness of the Deep Learning-oriented FIVES model in improving reading literacy, an N-Gain test was conducted. The following are the results of the N-Gain test:

Table 4 N-Gain Test of Reading Literacy

Descriptive Statistics

	N	Minimum	Maximum	Mean	Standard Deviation
Ngain_Score	15	.33	1.00	.5860	.20943
Gain_Percent	15	33.33	100.00	58.6032	20.94283
Valid N (listwise)	15				

Based on the results of the N-Gain calculation, the average score is 58. These values are included in the moderate category, and indicate that the implementation of the Deep Learning-oriented FIVES model is quite effective for use.

To determine reactions to the developed product, teachers and students were given a response questionnaire. The results obtained were 75% of students' responses in the good category and 91.67% of teachers' responses in the very good category. After conducting a limited test, the fifth stage, the main product revision, was carried out. At this stage, the researcher revised the test instrument, particularly the sections deemed difficult for students to understand or that presented difficulties. The purpose of this revision was to make the test questions easier to understand, more appropriate to students' abilities, and to accurately measure expected competencies before the product was tested in the next stage. After the test questions were revised, the next step was to test the quality of the test questions through validity, reliability, difficulty level, and discriminatory power. The summary results of the instrument are presented in the following table.

Table 5 Results of Validity, Reliability, Difficulty Level and Distinguishing Power tests

Question Indicator	Question Number	Validity Test		Reliability Test		Distinguishing Power		Difficulty Index	
1	1	0.702	Valid	0.832	Tall	0.616	Good	0.80	Easy
2	2	0.551	Valid			0.456	Good	0.87	Easy
3	3	0.780	Valid			0.691	Very good	0.53	Currently
4	4	0.685	Valid			0.576	Good	0.67	Currently
5	5	0.582	Valid			0.451	Good	0.67	Currently
6	6	0.633	Valid			0.513	Good	0.67	Currently
7	7	0.652	Valid			0.531	Good	0.60	Currently
8	8	0.518	Valid			0.386	Enough	0.73	Easy
9	9	0.629	Valid			0.529	Good	0.20	Difficult
10	10	0.589	Valid			0.499	Good	0.13	Difficult

The next stage is the sixth stage, namely the main field testing given to 60 fifth-grade students at Purwadadi II Public Elementary School, with 30 students in the experimental class and 30 students in the control class. In the experimental class, the Deep Learning-oriented FIVES model was used, and in the control class, learning was carried out normally as is usually done by the class teacher using conventional learning. Students were given a pretest at the beginning of the lesson and a posttest at the end of the lesson. Furthermore, the pretest and posttest data were analyzed using the normality test, the Mann-Whitney test, and the N-Gain test. The following are the results:

Table 6 Results of the normality test of the pretest for reading literacy skills

Tests of Normality

		Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Class	Statistics	df	Sig.	Statistics	df	Sig.
Mark	Pretest Control	.168	30	.030	.891	30	.005
	Experimental Pertest	.109	30	.200 *	.961	30	.330

Based on the results of the normality test, it was found that the pretest value for the control class was 0.005 < 0.05, indicating that the data was not normally distributed, while the value for the experimental class was 0.330 > 0.05, indicating that the pretest data for the experimental class was normally distributed. Because there were still data that were not normally distributed, a nonparametric Mann-Whitney test was conducted to compare the two groups.

Table 7 Results of the Mann-Whitney pretest data analysis of reading literacy skills

Test Statistics [a]

	Mark
Mann-Whitney University	385.000
Wilcoxon W	850.000
Z	-.975
Asymp. Sig. (2-tailed)	.330

Based on the results of the Mann-Whitney test on the pretest data, a sig. 0.330 > 0.05 was obtained. This indicates that there was no significant difference in students' reading literacy between the control and experimental classes before the intervention. This was followed by a posttest normality test.

Table 8 Results of the post-test normality test for reading literacy skills

Tests of Normality

		Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Class	Statistics	df	Sig.	Statistics	df	Sig.
Mark	Posttest Control	.177	30	.017	.906	30	.012
	Experiment Posttest	.206	30	.002	.918	30	.024

Based on the results of the normality test, the posttest data in the control class was 0.012 < 0.05 and the experimental class was 0.024 < 0.05, indicating that both data were not normally distributed. Because some of the data were not normally distributed, a nonparametric Mann-Whitney test was conducted to compare the two groups.

Table 9 Results of the Mann-Whitney posttest data analysis of reading literacy skills

Test Statistics [a]

	Mark
Mann-Whitney University	256.500
Wilcoxon W	721.500
Z	-2.914
Asymp. Sig. (2-tailed)	.004

Based on the Mann-Whitney test results on the posttest data, a value of 0.004 < 0.05 indicates a significant difference between the two classes after the intervention. To determine whether there was a difference in reading literacy improvement between the control and experimental classes, an N-Gain normality test was conducted. The results are as follows:

Table 10 Results of the N-Gain normality test for reading literacy skills

Tests of Normality

		Kolmogorov-Smirnov [a]			Shapiro-Wilk		
	Class	Statistics	df	Sig.	Statistics	df	Sig.
NGain Score	Control	.190	30	.007	.897	30	.007
	Experiment	.136	30	.163	.941	30	.098

The results of the normality test showed that the N-Gain score for the control class had a significant value of 0.007 < 0.05, indicating that the data was not normally distributed. Meanwhile, the N-Gain score for the experimental class was 0.098 > 0.05, indicating that the data was normally distributed. Because one of the groups did not meet the normality assumption, a nonparametric Mann-Whitney test was performed. The results are as follows:

Table 11 Results of the Mann-Whitney N-Gain analysis of reading literacy skills

Test Statistics [a]

	NGain_Score
Mann-Whitney University	106.500
Wilcoxon W	571.500
Z	-5.109
Asymp. Sig. (2-tailed)	.000

Based on the results of the Mann-Whitney N-Gain test, a sig. value of 0.000 < 0.05 was obtained, indicating that there was a significant difference in the increase in reading literacy skills between the experimental class and the control class.

To statistically substantiate the findings, an effect size calculation was performed to determine the magnitude of the intervention's impact. Based on the Mann-Whitney test results on the N-Gain score, the Z-value was -5.109. Next, the effect size was calculated to determine the strength of the intervention's impact in practice. The effect size calculation in the Mann-Whitney test uses the following formula:

$$r = \frac{Z}{\sqrt{N}}$$

Information:
r = effect size value
Z = Z value in the Mann-Whitney test results
N = total number of samples
Because absolute values are used, then:

$$r = \frac{5,109}{\sqrt{60}}$$

$$\sqrt{60} = 7,746$$

$$r = \frac{5,109}{7,746}$$

$$r = 0,66$$

Based on the classification (Jacob Cohen, 1988) :

- 0.10 = small
- 0.30 = moderate
- 0.50 = large

The calculation results show an *effect size* of r = 0.66. Based on Cohen's (1988) interpretation, this value is considered large. This indicates that the implementation of the Deep Learning-oriented FIVES model has a strong influence on improving students' reading literacy.

The research then continued to determine the responses of teachers and students from the experimental class to the product. The results of the teacher response questionnaire during the field trial showed a score of 89.58%, categorized as very good, and the student response questionnaire showed a score of 77.50%, categorized as good. This product received a positive response from both teachers and students.

The final stage of this research is the seventh stage, the operational product revision, which involves refining the model based on the results of field trials and effectiveness tests. The purpose of this revision is to improve syntax clarity, enhance the effectiveness of learning time management, and adjust reading literacy indicators. Based on the results of classroom implementation, the activities strengthened were the inference and experiences stages, the formulation of better reflective questions, and the simplification of instructions for easier student understanding. Furthermore, the assessment instrument was also adjusted to measure students' abilities to find information, interpret and integrate information, and evaluate and reflect on information. The purpose of this operational revision is to refine the model before it is released as a final product that can be used in reading literacy learning in elementary schools. Furthermore, repeated evaluations create a valid and reliable educational product (Ade Rahayu, 2025) .

Discussion

The results of the study indicate that the Deep Learning-oriented FIVES model significantly improves elementary school students' reading literacy skills. This improvement was seen both in limited trials and in extensive field trials. In the limited trial, the Wilcoxon results showed a significant difference between pretest and posttest scores ($p < 0.05$) with an average N-Gain value of 58.60% which is in the moderate/quite effective category. Meanwhile, in the extensive field trial, significant differences were also found in the posttest results between groups ($p = 0.004 < 0.05$) and in the N-Gain score ($p = 0.000 < 0.05$) with an effect size of 0.66 which is included in the large category according to Cohen (1988).

These findings indicate that the Deep Learning-oriented FIVES model not only provides statistical differences but also has a high practical influence on improving students' reading literacy. Improvements in limited testing can be explained by the systematic syntactic structure of the FIVES model. The Fact stage helps students identify explicit information (access and retrieve), the Inference stage encourages students to develop the ability to interpret and integrate information (interpret and integrate), while the Experiences and Summary stages train students to reflect and evaluate information (evaluate and reflect). This structure aligns with the reading literacy indicators in the national AKM (Amir et al., 2024).

Furthermore, the integration of deep learning principles (mindful, meaningful, and joyful) strengthens students' cognitive processes. A mindful learning approach encourages conscious thinking,

meaningful learning connects texts with students' real-life experiences, and joyful learning creates positive emotional engagement. This aligns with research (Difa Maulidya et al., 2025) which states that deep learning enhances students' reflective engagement and conceptual understanding.

In the extensive field test, more consistent improvements occurred because the model was revised based on the results of the limited test. Revisions to the instrument and refinements to the inference and experiences stages clarified the direction of students' thinking. These improvements demonstrate the importance of the evaluation cycle in R&D research, as emphasized by (Ade Rahayu, 2025) , that educational product development requires repeated revisions to increase validity and effectiveness.

The results showed that the experimental class achieved significantly higher achievement than the control class (57.96% vs. 33.38%). This significant difference indicates that conventional, teacher-centered learning is less effective in developing students' higher-order thinking skills (Simbolon et al., 2025).

According to (Learning et al., 2025), conventional learning emphasizes finding explicit answers in texts, thus only activating surface learning processes. In contrast, the Deep Learning-oriented FIVES model encourages students to analyze, interpret, and reflect. This aligns with the opinion (Putrawangsa & Hasanah, 2022) that Indonesia's low literacy achievement is influenced by learning practices that do not encourage deep thinking. This finding also supports the research findings (Johansz, 2025) which stated that the implementation of deep learning significantly influences elementary school students' reading abilities.

The results of the study show that the increase in reading literacy does not only occur in the aspect of finding information, but also in the ability to interpret and evaluate information (Wijaya & Dewayani, 2021) , this is important because the AKM indicators no longer assess mechanical reading skills, but rather the ability to think critically about texts.

The FIVES model helps students move from understanding explicit information to inferential and reflective understanding. Therefore, this model is relevant to the direction of national education policy, which focuses on 21st-century literacy competencies.

The effect size of 0.66 indicates that the influence of the Deep Learning-oriented FIVES model is large. This means that the differences are not only statistically significant but also educationally meaningful. In the Education study by (Nasution et al., 2026), a large effect size indicates that the intervention has a significant impact on student learning. This strengthens the claim that the FIVES model is not only theoretically feasible but also empirically effective.

The novelty of this research lies in the integration of the FIVES model with the Deep Learning approach, which has not previously been empirically tested in the Indonesian elementary school context. While previous research has primarily examined FIVES or deep learning separately (FL Sari & Nirmala, 2025) , this study combines the two within a single, operational and structured pedagogical framework. Thus, this research provides a contribution in the form of a reading literacy learning model that is aligned with AKM indicators, based on a deep learning approach, statistically tested with a large effect size, and has gone through validation and systematic revision stages by experts.

CONCLUSION

This study aims to develop and test the effectiveness of the FIVES learning model, oriented towards deep learning, in improving elementary school students' reading literacy skills. The model development was carried out through seven stages modified from the Borg and Gall model, including needs analysis, planning, initial product development, limited trials, main product revision, field trials, and operational revision (RK Sari, 2024).

Expert and practitioner validation results indicate that the developed model is highly suitable for use in learning. Limited trials revealed a significant difference between reading literacy skills before and after model implementation. In the field trial phase, analysis results showed no difference in initial abilities between the experimental and control classes, but a significant difference was observed after treatment. N-Gain analysis showed that reading literacy skills improved significantly in the experimental class compared to the control class.

Furthermore, the Mann-Whitney test results on the N-Gain score showed a significance value of 0.000 < 0.05 with an effect size of r = 0.66, which is included in the large category. This indicates that the Deep Learning-oriented FIVES model is not only statistically significant but also has a strong influence on improving students' reading literacy skills. Teacher and student responses that are in the good to very good category further strengthen that this model is feasible and effective for implementation in reading literacy learning in elementary schools. Thus, the Deep Learning-oriented FIVES model can be recommended as an innovative alternative in reading literacy learning that encourages active involvement, deep understanding, and the development of students' higher-order thinking skills.

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