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Webbed Integrative Approach in Designing Writing Instruction for Indonesian Elementary Class in the Digital Era

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ABSTRACT

Traditional teaching materials often rely heavily on textbooks and mid-range content, lacking integration with thematic learning models. This study explored the use of teaching materials based on the webbed-type integrated learning model for the theme of living things, in contrast to the traditional use of mid-range materials and textbooks. The objective was to evaluate the effectiveness of these integrated materials on students' essay-writing skills. A quantitative experimental design was employed, involving a sample of 22 students selected through total sampling. The findings revealed that the webbed learning model significantly improved students' essay writing abilities, as evidenced by higher post-test scores compared to pre-test scores. Consequently, it can be concluded that webbed-type integrated teaching materials positively impact thematic lessons on the theme of living things and serve as a valuable resource for educators in enhancing the thematic learning process.

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1. INTRODUCTION

Writing ability is considered the most difficult ability to master, even by native speakers of the language in question. Writing exercises involve more than just expressing one's own thoughts; they also call for communicating others' ideas, knowledge, experiences, conceptions, sentiments, and hopes (Graham et al.,2015). Writing instruction has to be improved because it is crucial to learning Indonesian in school (Warren et al., 2008; Hamsiah, et al., 2023). This disregard for writing teaching as a pedagogical strategy has been noticed in other places (Grisham & Wolsey, 2016). Therefore, enhancing writing instruction is essential for fostering comprehensive language proficiency and academic success.

However, the spelling of menis writing at this time was not accurate (Graham et al., 2012). Given the significance of writing, it is crucial to encourage the development of writing abilities at

an early age, especially for kids who find writing difficult or unpleasant (Finlayson & Mccrudden, 2019; Rahmayantis & Nurlailiyah, 2020). Students and teachers focus more on learning theoretical materials that students in the national final exam understand; the students have been exposed to much knowledge about Indonesian writing and grammar genetics. However, they did not get writing practice (Asdar, 2016). Many teachers assume that basic grammar will enable students to write (Jubhari et al., 2022). However, the most important thing that has to be theoretical is the practice of writing, not cramming theory (Fang et al., 2020). The result shows that the students who write are increasingly deficient and tired, and they are very conscientious (Myers et al., 2016). The low quality of students' writing arrangements has always been sidelined.

Someone gets knowledge from supporting institutions such as formal school institutions. In school, they will gain knowledge in the learning process (Fauza et al., 2022; Setiwan & Musaffak, 2021). The curriculum is a device containing lesson plans and methods that will be used as a guide in teaching and learning activities within a certain time (DeLuca, et al., 2015; Mccarthey & Woodard, 2017). The teaching and learning process in the classroom can affect the quality of education because education is the most important thing in one's life. The learning process is an activity with educational value (Gadsden & Mcdermott, 2016; Imran & Sulviana, 2022), which the interaction between the teacher and students. The teacher with all efforts to plan learning activities systematically by utilizing everything for the benefit of a quality learning process. Learning can be implemented through quality of learning activities (Fu & Sibert, 2017). Effective learning outcomes are attained by the interaction of numerous, mutually beneficial elements. Use of technology in educational activities is a crucial component of teaching materials and learning materials.

Learning to write at school has been monotonous. The teacher provides teaching writing by applying traditional methods. Generally, the teacher explains the writing material and gives essay topics, and students are assigned to write essays. After students finish writing, the student writing results are collected to be assessed by the teacher, and ends with giving homework. The teachers' attention to learning patterns is more devoted to the completeness of delivering the material; as a result, most students are passive in participating in learning activities. This kind of learning does not arouse students' passion for writing.

Learning activities are a process of education that allows participants who learn to develop themselves into an ability that is getting longer by improving in all aspects, good in attitudes, knowledge, and the skills that are needed for life and society, the nation, and contributing to the well-being of life. Therefore, moderate spending is an activity that empowers all potential students to become competent. The process of training facilities and infrastructure so that training can run smoothly, under control, effectively, and efficiently.

The development of science today is good at making the learning process interesting and fun. Teaching materials can create an atmosphere that attracts students' attention in the learning process (Hasanudin, et al., 2023). The quality of an educational program is influenced by a variety of factors, including the quality of students, the quality of teachers, the quality and accessibility of teaching materials, the curriculum, the facilities and infrastructure, and management. This is true even when considering the development of teaching materials as one of the innovative and creative efforts in the field of education.

Teaching materials of all kinds are one of the elements that make up education and one of the things that affect how good an education is teaching aids to help the administration of learning activities. Printed instructional aids like books, workbooks, modules, and other materials are utilized as a tool during the learning process. To create a setting or atmosphere where the students can learn, teaching materials are organized in a methodical way (Kurniawati et al., 2017). Numerous issues with the learning process arise if the instructional materials do not meet the standards (Saud et al., 2014). In developing teaching materials with an integrative

design, several stages must be passed, namely analyzing the needs of teaching materials, selecting learning resources, and compiling a map of teaching materials based on structure.

Along with the rapid development of information and communication technology (Sujarwo et al., 2020; Nurhikmah, et al., 2023), teaching materials have a variety of types and are more effective than beekeeping (Ahmar & Rahman, 2017). Through technology development, teachers can develop or innovate teaching materials according to the needs of students to achieve under-competence learning. For teaching material cycles that support the learning process, a learning concept can be used using a learning model with a pose of learning in a learning activity.

Webbed-type integrative learning is a learning model that can be applied within the scope of elementary schools. This learning has certain themes that are considered relevant to the abilities of students in elementary schools so that the learning process carried out can have a large impact on the development of children's potential according to the desired educational goals. This goal becomes very important in teaching because teaching is a deliberate and reasoned action. Teaching is intentional because teaching is always intended to achieve a goal, namely to facilitate students in learning. In that connection, Webbed-type integrative learning is a type that has meaning in the learning process by using themes as a reference. That is, the theme becomes central in the learning process with this Webbed-type integrated learning model, which can have a relationship with one another. One theme can connect with other bound subject matter and can be explained on an ongoing basis. Basically, thematic learning places more of an emphasis on students' active participation in the learning process (Kanematsu et al., 2019).

The students can gain direct experience and are trained to be able to discover for themselves the various knowledge they are learning. Using the Webbed-type integrated learning model directs students to remain active and aligned according to the learning taught by the teacher. Using the webbed-type integrated learning model makes students know more clearly and understand the real meanings and experiences presented, which are contained in the webbed-type integrated learning concept.

The results of the observational data and interviews conducted by researchers with the homeroom teacher. The school already has adequate facilities such as LCD/projectors and others, but there are still limited facilities and infrastructure. In the learning materials, students still use textbooks from the government without using other textbooks. This situation makes students less active in learning activities; the use of learning models only uses lecture and assignment methods without using media or other teaching materials with the help of learning models, so that students' attitudes during the process of teaching and learning activities are only seen and listened to without any direct experience given when learning begins. The researchers found a few problems in the school currently being prepared in Kerala. A lack of variety of media and learning resources confirmed students' interest in learning, especially in learning Indonesian. With the teaching materials that the teacher used, there was no barometer for the reliability analysis results at the school.

Therefore, students do not understand what the teacher conveys because they are only fixated on the textbooks used in the teaching and learning process without using an active learning model to arouse students' curiosity in learning activities. The success of student learning in participating teaching and learning activities at school is largely determined by their mastery of the teaching materials used when studying (Yao et al., 2022). Learning materials and teaching methods should be introduced (Suzuki et al., 2020). The results of this study align with previous research indicating the positive impact of innovative teaching methods on student learning outcomes. These findings underscore the importance of integrating technology and active learning models in writing instruction to enhance student engagement and performance.

Prior research by Myers et al, (2016) highlighted the importance of teacher preparation programs focusing on writing skills. Thematic learning into curricula that are web-based

significantly improved students' ability to read informational texts. It is evident from the disparity between their reading skills prior to and following their use of the webbed curricula model (Puspita et al., 2020). Among the students with a field-dependent learning style, students who learn using a webbed-type integrated learning model acquire fewer thinking skills than those who learn using an integrated linked-type learning model (Harfiyani et al., 2018).

To address the gap in current writing instruction practices, this study investigates the effectiveness of implementing a Webbed-type integrative learning model to enhance students' writing abilities in Indonesian schools. Thematic-integrative learning, which unifies various parts under a single theme, serves as the foundation for this approach. Specifically, the study focuses on the advantages of the webbed integrated model in writing education for Indonesian primary school children in the digital age. It emphasizes the importance of a framework that expands writing instruction by examining its impact on other skills, such as reading, listening, and speaking. By explicitly stating the research objectives, including developing and evaluating webbed-type integrated teaching materials on the theme of living things, the study sets a clear direction for achieving meaningful writing competency.

2. METHODS

2.1 Research Design

This research employs an experimental and quantitative approach, selected to determine the impact of the webbed learning model on Indonesian language instruction. The study is categorized as pre-experimental, involving only one group—the experimental group—without any comparison or control group. Initially, a pre-test is conducted to assess students' baseline writing abilities. Following this, the treatment involves teaching essay writing using the webbed method according to the lesson plan. After the treatment, a post-test is administered, and the results are analyzed using a t-test to evaluate the effect of the essay writing learning model on thematic subjects. The study employs a one-group pre-test and post-test design, focusing solely on one non-randomized class without stabilizing or clarifying the group conditions before the intervention. The initial test (pre-test) serves to determine the students' scores prior to the treatment.

2.2 Population and Sample

Population is an area of generalization based on objects/subjects with certain qualities and characteristics examined by research for generalization and consumer interest (Creswell, 2014). The population in this research was all students, representing 22 students. The sample is part of the number and characteristics that are met by the population (Juuti & Lavonen, 2012). The sample used in this research consisted of 22 students. The total sampling technique is where the number of samples is the same as the population (Kumar, 2011). Determination of samples in kandi with only one class with the same character, both from the cognitive, affective and psychomotor aspects.

2.3 Instruments

An instrument is a tool used to measure observed phenomena. In this research, two types of instruments were used: test results to determine differences in student performance when writing essays using the webbed learning model compared to a non-webbed model. The assessment of writing essays is based on five aspects, each with specific criteria. The content aspect includes three criteria: similarity and accuracy of the writing to the object, and impression creation. The organizational aspect covers three criteria: paragraph content, paragraph cohesiveness, and content clarity. Vocabulary is assessed based on the potential for the right word and the choice of

the right word. The language usage aspect evaluates the accuracy of sentence structure and sentence variety. Finally, the mechanical aspect considers diction and the use of proper punctuation. Table 1 provides the detailed essay assessment scores.

Table 1. Essay Writing Assessment Score

Aspect	Score
Content	30
Organization	20
Vocabulary	20
Language in Use	25
Mechanics	5
Total	**100**

The essay evaluation guidelines in the table are based on the essay assessment theory widely used in the ESL (English as a Second Language) program from Nurgiyantoro's book (2010: 441), namely as follows. The criteria used to determine student scores are a scale of five based on the standard categorization technique of learning outcomes established by the Ministry of National Education. Student learning outcomes are also systems for achieving individual learning outcomes. The criterion for a Kiwata student to complete his studies is if he has a minimum score of 65 passes with a KKM that the school committee strictly enforces. The completeness categorization of student learning outcomes can be seen in Table 2 below:

Table 2. Indonesian Language Learning Outcomes Standard Category

Mark	Learning Completeness Category
$65 < \times \leq 100$	Complete
$0 < \times \leq 64$	Not Completed

Documentation can be in photos and other documents as research authentic proof and the document is a fixed record that is already valid. This document can be in the form of writings, drawings, or monumental works from someone. The document is a fixed record that is already valid. Documentation is another way to store data from respondents (Leavy, 2017). In this technique, the researcher is asked to convey information from various sources or documents available to the respondent. Documentation in this preparation represents the results of students' writing in writing essays.

2.4 Data Collection Techniques

The data collection technique used in this research is the way of figuring out the data used for research. This data collection technique uses test and non-test instruments. The test instrument is essay questions, while the non-test instrument is documentation, namely the results of student essays.

Collecting data is done on each activity, situation or incident that relates to the actions of research done. This means for the development of persuasion research. In detail, the data collection technique in this research is as follows:

1) The value of the skill of the writer is obtained from these things.
2) Preliminary documentation of photos taken during the bachelorette process that followed from each meeting of research.

Validity is a measure of a measuring instrument's reliability or validity level. If an instrument is used to be valid, it can be used to measure the value of the instrument. In this research, the instrument used was an essay writing test. By the way, the validity being tested is construct validity testing. A test has constructive validity if the test items that are constructed measure

every aspect of the tests in the special instructional objectives. The opinion of the experts (judgment experts) can be used to test the validity of the construction,

After the instrument has been constructed, it will be meditated on with specific theories, and it can be constructed with experts by asking for information about the instrument that has been tested. In this case, the expert whose duty is important is the thesis writing supervisor who has graduated from a majors.

2.5 Data Analyst Techniques

The data generated through the predefinition instrument is then processed and analyzed, so that the discharge can be beluga-specific vesicles and test hypotheses. This study's valid data analysis technique is the t-test analysis assisted by the SPSS program. Analytical techniques were retained using the t-test to find out the warm-up handling of writing essays between the experimental group using the webbed learning model and not using the webbed learning model. Before doing the hypothesis test, we first tested the prerequisites for data analysis, namely the normality and homogeneity tests, to determine whether the data were normally distributed and the variance field was homogeneous. The step-by-step steps that are done in the data analysis are as follows:

2.6 Normality test

The normality test is a test that is determined to determine whether or not the distribution of the data to be analyzed is normal. Done normality test using the Kolmogorov Smirnov Test formula, done with the Asymp Sig rule or p-value. In this research, the normality test was conducted against the pretest and post-test scores, and the experimental group used the webbed learning model and did not use the webbed learning model. The normality calculation process uses the SPSS program computer assistance. Interpretation of the normality test results by looking at the sig. (2-tailed).

2.7 Homogeneity Test

After the two samples are normally distributed, the intermediate step is to find the homogeneity value. The sample homogeneity test is a portion of the sample, namely whether or not the sample variants are drawn from the same population; it is necessary to carry out a statistical test (test of homogeneity of variances) on the distribution of the largest scores. Homogeneity test on pretest and post-test scores if the calculated significance value is greater than the significance level of 0.05 (5%), then the test results score does not have a variance or is homogeneous. Calculation of homogeneity using SPSS program computer assistance. After testing the prerequisites, the next step is to test the hypothesis using the t-test. This t-test is used to test the average value of the group has a comparison or not. In this research, researchers used the help of the SPSS program for t-test contacts.

3. FINDINGS AND DISCUSSION

Based on the results of the research conducted through the data collected from the instrument test were collected. To enhance the analysis, researchers elaborated on how the increase in mean and standard deviation values from the pre-test to the post-test indicates improvement in students' writing skills. Additionally, discussing the distribution of scores in each category of the frequency distribution table can offer insights into the effectiveness of the treatment on different levels of students' performance.

3.1 Results of Student Writing Skills (Pre-test-post-test)

Based on the pretest-posttest results of the research written in essays on fifth-grade students, then the next data will be analyzed into descriptive statistics with the following values:

Table 3. Summary of Statistical Data of Pre-test and Post-test Writing Skills

Statistics	Pretest	Post Tests
Means	61.59	70.59
Median	61	69
Mode	61	69
Std. Deviation	5.92	9.15
Variances	35.11	83.87
Range	21	34
Minimum	51	60
Maximum	72	94
Sum	1355	1553

The pre-test mean value is 61.59, the median value is 61, the mode is 61, the standard deviation value is 5.92, the variance value is 35.11, the range value is 21, the minimum value is 51, the maximum value is 72 and the sum value is 1335. Meanwhile, the post-test mean value is 70.59, median value is 69, mode value is 69, standard deviation value is 9.15¸ variance value is 83.87, range value is 34, minimum value is 60, maximum value is 94, and sum value is 1553.

Table 4. Pretest and Posttest Scores Distribution by Category

Score	**Category**	**Pretest**	**Postest**
0 – 54	Very low	4	0
55 – 64	Low	12	8
65 – 79	Moderate	6	10
80 – 89	High	0	3
90 - 100	Very high	0	1
Total		22	22

Based on table 1.4, the results of the pre-test essay writing results for students in class V are low, while the results of writing essays post-test or after being given threatment have high category. Seeing the percentage of mastery writing essays pretest-posttest students.

Table 5. Description of Students' Pretest-Posttest Essay Writing Completeness

Intervals Score	**Category**	**Pretest**	**Posttest**
$0 \leq \times \leq 64$	Not Completed	16	8
$65 \leq \times \leq 100$	complete	6	14
Total		12	12

Based on table 1.5, it is shown that the criteria of an individual student is complete learning when he obtains a maximum score of 65. While the results of the post-test, 8 students do not complete the learning criteria, and 14 other students complete the criteria minimum of the total number of students. To enhance clarity, consider explaining how the normality test ensures that the data follows a normal distribution, which is essential for applying certain statistical analyses. Similarly, elaborate on how the homogeneity test confirms that the variances in pre-test and post-test data are not significantly different, which is crucial for interpreting the results of subsequent statistical tests.

3.2 Normality Test

The data in the normality test were Irkebada from the pretest and posttest section on writing essays by students. In this research, researchers used SPSS 16.00. in the normality test contact, which functions to find out whether the data distribution is normally distributed or not.The results of the normality test of essay writing skills can be seen in the following table:

Table 6. Results of Normality Test Scores Pretest and Posttest Skills Writing

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residualed
N		22
Normal parameters	Means	.0000000
	std. Deviation	9.13483565
Most Extreme Differences	absolute	.197
	Positive	.197
	Negative	-.146
Kolmogorov-Smirnov Z		.922
asymp. Sig. (2-tailed)		.363

Based on the table 1.6 above, it is known that the significance value as 0.363 is greater than 0.05 or 0.036 > 0.05, so it can be concluded that the data comes from the normally distributed population. With the results of normally distributed calculations, the data has been determined for doing analysis.

3.3 Homogeneity Test

After confirming that the southern pretest sample data are normally distributed, the next step is to assess the homogeneity of the group's pretest and posttest variance values. The homogeneity test was conducted using the SPSS 16.00 software. The criteria for homogeneity testing are as follows:

If the probability (p-value) is greater than 0.05, the null hypothesis (Ho) is accepted, indicating that the variances are homogeneous.

If the probability (p-value) is less than 0.05, the null hypothesis (Ho) is rejected, indicating that the variances are heterogeneous.

The results of calculating the homogeneity test for data variance (Levene's Statistics) using the SPSS program are provided below. This step is crucial as it ensures that the assumptions for subsequent statistical analyses are met, thereby validating the reliability of the experimental results.

Table 6. Test of Homogeneity of Variances

Levene Statistics	df1	df2	Sig.
.	3	6	.230

Based on the table 1.7 above, it is measured that the significance value is 0.230 greater than 0.05 or 0.230 > 0.05. This means that the score on the test results does not have a variance or homogeneous difference.

3.4 Hypotheses Test

T-test using computer assistance using the SPSS application Version 16.00. The t-test of the pretest and post-test data on writing this essay, the affinity to find out the difference between the students' initial and final comparisons, and the results of the comparison of writing essays or not. Testing the design hypothesis uses the SPSS program. The criteria for testing the hypothesis are as follows:

If probability > 0.05, then Ho is equal.
If the probability <0.05, then Ho is rejected.

The results of the test of hypotheses can be seen in the following table:

Table 7. Results of the t-test Pretest-Posttest data on Essay Writing SkillsCoefficients

Model		Standardized Coefficients		Standardized Coefficients	Q	Sig.
		B	std. Error	Betas		
1	(Constant)	58,332	10,268		5,681	.000
	Posttest	046	.144	071	4,320	.752

According to the t-test analysis results, the frequency d.b = (N-1) = 22 - 1 = 21 and the calculated t-value obtained is 4.320. It is possible to acquire the value of the t table = 1.720 at a significant level of 0.05 (5%). As a result, the alternative hypothesis (H1) is accepted, and the null hypothesis (H0) is rejected because t-count exceeds t-table. This result proves that the use of the webbed learning model has a significant effect on essay writing skills.

Based on the results of the calculations that have been carried out, it appears that the acquisition value after treatment is higher than the acquisition value before treatment. The result can be seen from the pre-test; the highest score is 72, the lowest score is 51, the pre-test average is 61.59, the median is 61, the mode is 61, and the standard deviation is 5.92. Furthermore, the highest post-test score was 94, the lowest score was 60, the post-test average was 70.59, the median was 69, the mode was 69, and the standard deviation was 9.15.

The t-test analysis's findings indicate that the computed t-value was 4,320, with a frequency of d.b = (N-1) = 22 - 1 = 21. The t-table = 1.720 is found when the significance level is set at 0.05 (5%). T-count > T-table, or the alternative hypothesis (H1) is accepted and the null hypothesis (H0) is rejected. This result proves that the use of the webbed learning model has a significant effect on essay writing skills.

To improve the discussion, consider elaborating on how the calculated t-value exceeding the critical t-value at a significance level of 0.05 supports the conclusion that the webbed learning model has a significant effect on essay writing skills. Additionally, discuss the practical implications of accepting the alternative hypothesis and rejecting the null hypothesis in the context of educational interventions.

Discussion

This study aims to investigate the webbed-type integrated model-based teaching materials on the theme of Living things, knowing the qualifications of teaching materials based on integrated Webbed-type learning model in the theme of caring for living things. The researchers elaborated on how the structure or activities within the webbed learning model support students in identifying, developing, and incorporating themes into their essays. By illustrating how the model fosters thematic connections, the analysis will be more cohesive and compelling.

The model is interpreted as an object or concept used to represent something. A learning model is a plan or pattern used to shape lesson plans, design learning materials, and guide learning in class or other ways (Akhiruddin, Sukmawati, Jalal, Sujarwo, 2021; Farida Febriati et al., 2022). Among the learning models, the webbed learning model is learning that integrates teaching materials and learning experiences through the integration of themes.

The webbed learning model is one of the models that involves intelligence. Webbed learning model is evidenced by the application in the use of learning models; webbed is a learning model that is easy to understand and use in a lesson. The webbed learning model can play an important role in a subject. Using the webbed learning model as a writing learning model, in addition to being easy to understand, also makes it easier for students to generate ideas which are then poured into written form in the form of essays. The webbed learning model integrates teaching and learning experiences by integrating themes. The theme in making the essay also becomes a binding link between one paragraph and another paragraph and one main idea with another main idea. The theme given or presented to students must also be interesting and make students enthusiastic about working on essays.

Although there are students who do not want to do this, the reason is that they cannot, they cannot develop the ideas that have been made, and some even say they are lazy in writing an essay. Teachers who believe they did not have enough time for writing may observe how other educators fit writing practice and instruction into their schedules and take advantage of any chances to incorporate writing into their lessons. Teachers who struggle to scaffold their instruction effectively and make inadequate attempts to fulfill the writing demands of students with a range of skills should look up to teachers who do so. Teachers who feel forced to concentrate on conventions—such as spelling and punctuation—need to watch and understand how much teachers implementing policies focus on substance, including concepts and structure. Giving teachers a chance to collaborate with colleagues in their grade level or content area teams is one potential answer (Harward et al., 2014).

However, after being given direction and motivation and interesting learning provided by the researcher, these students were given direction and motivation as well as tips for working on essays through webbed learning provided by the researcher; these students were able to write and complete their essays. It is not easy to put ideas into writing; you need continuous writing practice, because writing is a practical skill activity. An effective writing practice at a time of increasing emphasis on student writing ability (Wilcox et al., 2014). Actually, writing activities can be taught not only at school but also at home. The webbed learning model provided by the researcher is one of the learning models developed from thematic learning models. This webbed learning model helps students pour ideas into written form by developing essay themes presented by researchers. So that students' essay writing skills get an increase. The results obtained from this study are that the data analyzed using the t-test at a significant level of 95% ($\alpha = 0.05$). So, it can be concluded that there are significant differences between students who follow the webbed learning model and students who follow the conventional learning model.

Some results of the study stated that among a group of students with a field-dependent learning style, students who learn using a webbed-type integrated learning model acquire fewer thinking abilities than those who learn using an integrated linked-type learning model (Harfiyani et al., 2018). To encourage students to use and integrate numerous 21st-century learning concepts, the topic of energy in life makes use of an integrated form of 21st-century learning (Gusti & Ratnawulan, 2020). Studies have shown that it can help kids who have a lot of trouble writing and learning to write better

(Graham et al., 2015). Preservice teachers learn in a variety of contexts, from a variety of writing texts, and using a variety of writing techniques (Myers et al., 2016). The use of integrated learning is quite successful, and the answers from the students are excellent. This is especially true of the integrated thematic learning teaching model is very significant in enhancing the students' devotion and faith (Sunhaji, 2016). Increasing the number of perceptual criteria in the model would be beneficial, providing broader measures of the website quality; the more website areas could be evaluated using eye-tracking technology (Ziemba et al., 2017). Integrative learning combines various forms of integration, integrating learning materials, and learning experiences, and integrating cross-disciplinary skills, themes, concepts, and topics (Neni Nadiroti Muslihah, Risma Nuriyanti, Siti Ropah Purnamasari, 2016).

This study has limitation that the webbed integrative method to developing writing instruction for elementary-aged Indonesian students in the digital age. The results give future researchers a framework for expanding on this subject by looking at how it affects the other skills (reading, listening, and speaking skills) with a different data collection method and more participants in order to enhance writing instruction and achieve meaningful writing competency. This study has highlighted challenges such as resource constraints, teacher training requirements, or student resistance to the model. By acknowledging these potential limitations, the analysis becomes more comprehensive and realistic, including the implications of the study results for educational policy or practice. Furthermore, the webbed learning model affects students' essay writing skills. The webbed learning model can be seen from the results of the essay writing test before and after the webbed learning model was given. The results of the students' post-test showed a higher number than the results of the pre-test. Based on the explanation above, it can be stated that the webbed learning model is one of the right solutions for developing learning that can improve students' writing skills.

4. CONCLUSION

Broadening the range of perceptual criteria included in the model can be advantageous. By using eye-tracking technology, more website sections can be assessed to provide broader indicators of website quality. Additionally, the webbed integrative learning model significantly enhances essay writing skills, as evidenced by the comparison of pretest and post-test results. This model underscores the importance of attention in early writing fluency development, supported by teaching resources on the theme of living things developed based on this model. These resources can guide educators in facilitating the thematic learning process for Indonesian language students. The webbed integrative learning model enriches students' writing abilities and understanding of writing development, offering strategies to promote writing proficiency in elementary school students. It is recommended that students find engaging models that match their interests to aid in learning to write essays. Teachers should adopt the webbed learning model for teaching essay writing in Indonesian, and schools should implement and develop this model to improve students' writing skills. Addressing specific limitations encountered during the research, such as sample size constraints or methodological issues, and proposing strategies to mitigate these limitations in future studies, like increasing sample diversity or refining measurement tools, can strengthen the conclusions. This approach demonstrates a proactive effort to address research challenges and improve the validity of the findings.

REFERENCES

Ahmar, A. S., & Rahman, A. (2017). Development of teaching material using an Android. *Global Journal of Engineering Education*, *19*(1), 72–76. https://doi.org/10.26858/gjeev19i1y2017p7376

Akhiruddin, Sukmawati, Jalal, Sujarwo, R. (2021). Inside-Outside Circle Instructional Model For Multicultural Education. *Jurnal Pendidikan Dan Pengajaran*, *54*(2), 399–405. https://doi.org/DOI: http://dx.doi.org/10.23887/jpp.v54i2

Asdar. (2016). Perangkat Pembelajaran Menulis Teks Eksplanasi Berbasis Model Problem Based Learning (Studi Pengembangan pada Siswa Kelas VII SMP Negeri 8 Makasar). *Retorika: Jurnal Bahasa, Sastra, Dan Pengajarannya*, *9*(2). https://doi.org/DOI: 10.26858/retorika.v9i2.3800

Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications, Inc.

DeLuca, C., Ogden, H., & Pero, E. (DeLuca, C., Ogden, H., & Pero, E. (2015). Reconceptualizing Elementary Preservice Teacher Education: Examining an Integrated-Curriculum Approach. *The New Educator, 11(3), 227-250*. https://doi.org/10.1080/1547688X.2014.960986

Fang, Z., Cao, P., & Murray, N. (2020). Language and meaning making: Register choices in seventh- and ninth-grade students' factual writing. *Linguistics and Education*, *56*. https://doi.org/10.1016/j.linged.2020.100798

Farida Febriati, Dirwan Jaya, & H Nurhikmah. (2022). English Teaching Materials with Flipped Learning Model in English Course. *Journal of Education Technology*, *6*(4), 643–651.

Fauzan, Setiawan, A., Musaffak, & Rosita, F. Y. (2022). Pola penelitian membaca cepat dan implikasinya terhadap keterampilan membaca cepat bagi calon guru Bahasa Indonesia: Tinjauan pustaka sistematis. KEMBARA: Jurnal Keilmuan, Bahasa, Sastra, dan Pengajarannya (e-Journal), 8(2), 436-457. https://doi.org/10.22219/kembara.v8i2.22719

Finlayson, K., & Mccrudden, M. T. (2019). Teacher-Implemented Writing Instruction for Elementary Students: A Literature Review Teacher-Implemented Writing Instruction for Elementary. *Reading & Writing Quarterly*, *0*(0), 1–18. https://doi.org/10.1080/10573569.2019.1604278

Fu, Y., & Sibert, S. (2017). Teachers ' Perspectives: Factors That Integrated Curriculum in K-3 Classrooms Impact. *International Journal of Instruction*, *10*(1), 169–186.

Gadsden, V. L., & Mcdermott, P. A. (2016). An Integrated Curriculum to Improve. *American Educational Research Journal*, *XX*(X), 1–31. https://doi.org/10.3102/0002831210385446

Graham, S., Harris, K. R., & Santangelo, T. (2015). Research-based writing practices and the Common Core: Meta-analysis and meta-synthesis. *Elementary School Journal*, *115*(4), 498–522. https://doi.org/10.1086/681964

Graham, S., Mckeown, D., Kiuhara, S., & Harris, K. R. (2012). A Meta-Analysis of Writing Instruction for Students in the Elementary Grades. *Journal of Educational Psychology*, *104*(4), 879–896. https://doi.org/10.1037/a0029185

Grisham, D. L., & Wolsey, T. D. (2016). Writing Instruction for Teacher Candidates: Strengthening a Weak Curricular Area Writing Instruction for Teacher Candidates: Strengthening a Weak Curricular Area. *Literacy Research and Instruction*, *8071*(February). https://doi.org/10.1080/19388071.2010.532581

Gusti, D. A., & Ratnawulan. (2020). An analysis of development of student's worksheets with the theme integrated science energy in life by using integrated type of integrated learning in 21st century. *Journal of Physics: Conference Series*, *1481*(1). https://doi.org/10.1088/1742-6596/1481/1/012045

Hamsiah, A., Asdar, & Asia M. (2023). Increasing Indonesian Students' Writing Ability Through Make A Match Learning Model. *Jurnal Pendidikan Dan Pengajaran*, *56*(1). https://doi.org/10.23887/jpp.v56i1.54348

Harfiyani, A., Sudrajat, A., & Sumantri, M. S. (2018). The Effect of Integrated Learning (Webbed and Connected) and Cognitive Style on Critical Thinking Skills in Social Knowledge Learning. *East African Scholars Journal of Education, Humanities and Literature*, *1*(3), 95–96.

Harward, S., Peterson, N., Korth, B., Wimmer, J., Wilcox, B., Morrison, T. G., Black, S., Simmerman, S., & Pierce, L. (2014). Literacy Research and Instruction Writing Instruction in Elementary Classrooms: Why Teachers Engage or do not Engage Students in Writing. *Literacy Research and Instruction*, *December*, 37–41. https://doi.org/10.1080/19388071.2014.896959

Hasanudin, C., Subyantoro, Zulaeha, I., & Pristiwati, R. (2023). Learning materials and their prototypes for academic writing skills: The needs of Indonesian lecturers in the post-COVID-19 era. European Journal of Educational Research, 12(1), 435-453. https://doi.org/10.12973/eu-jer.12.1.435

Imran, M. C., & Sulviana. (2022). Using BBC Web-Based Learning Courses to Improve Vocational High School (VHS) students' Speaking Skill. *EDULEC : EDUCATION, LANGUAGE AND CULTURE JOURNAL*, *2*(1), 94–100. https://doi.org/10.56314/edulec.v2i1.34

Jubhari, Y., Sasabone, L., Nordin, T., & Kechik, T. (2022). The Students ' Perception on Teaching Narrative Writing Skills through Contextual Teaching and Learning (CTL) Approach. *International Journal of Education and Humanities (IJOLEH)*, *2*, 140–151.

Juuti, K., & Lavonen, J. (2012). Design-Based Research in Science Education: One Step Towards Methodology. *Nordic Studies in Science Education*, *2*(2), 54–68. https://doi.org/10.5617/nordina.424

Kanematsu, H., Barry, D. M., Shirai, T., Kawaguchi, M., Ogawa, N., Yajima, K., Nakahira, K. T., Kobayashi, T., & Yoshitake, M. (2019). Measurements of eye movement and teachers' concentration during the preparation of teaching materials. *Procedia Computer Science*, *159*, 1499–1506. https://doi.org/10.1016/j.procs.2019.09.320

Kumar, R. (2011). *RESEARCH METHODOLOGY a step-by-step guide for beginners* (3rd editio). SAGE Publications Ltd.

Kurniawati, M. W., Anitah, S., & Suharno, S. (2017). Developing Learning Science Teaching Materials Based on Scientific to Improve Student Learning Outcome in Elementary School. *European Journal of Education Studies*, *20*, 319–330. https://doi.org/10.5281/zenodo.398991

Leavy, P. (2017). *RESEARCH DESIGN: Quantitative, Qualitative, Mixed Methods, Arts-Based, and Community-Based Participatory Research Approaches*.

Mccarthey, S. J., & Woodard, R. (2017). Faithfully following , adapting , or rejecting mandated curriculum: Teachers ' curricular enactments in elementary writing instruction. *Pedagogies: An International Journal*, *00*(00), 1–25. https://doi.org/10.1080/1554480X.2017.1376672

Myers, J., Scales, R. Q., Grisham, D. L., Wolsey, T. D., Smetana, L., Yoder, K. K., Ikpeze, C., Ganske, K., Martin, S., Myers, J., Scales, R. Q., Grisham, D. L., & Wolsey, T. D. (2016). What About Writing? A National Exploratory Study of Writing Instruction in Teacher Preparation Programs What About Writing? A National Exploratory Study of Writing Instruction in Teacher Preparation Programs. *Literacy Research and Instruction*, *55*(4), 309–330. https://doi.org/10.1080/19388071.2016.1198442

Neni Nadiroti Muslihah, Risma Nuriyanti, Siti Ropah Purnamasari, E. J. M. (2016). Analysis the Implementation of the Webbed Type Integrative Thematic Learning Approach in 2013 Curriculum Context in Elementary School 1 Sukarame Bayongbong Garut. *Seminar Nasional Pendidikan Dan Kewirausahaan (SNPK 2020)*, *4*(Snpk 2020), 1–23.

Nurhikmah H, Abdul Saman, Pattaufi, S., & Mawarni, S. (2023). Blended Learning and Computers Self-efficacy Towards Students Learning Outcomes. *Proceedings of the Unima International Conference on Social Sciences and Humanities (UNICSSH 2022)*, *1*, 106–114. https://doi.org/10.2991/978-2-494069-35-0

Puspita, R. D., Hoerudin, C. W., & Yudiantara, R. A. (2020). Integrating Thematic Instruction using Webbed Curricula Model to Improve Students' Reading Comprehension on Informational Text. *Anatolian Journal of Education*, *5*(2), 1–18. https://doi.org/10.29333/aje.2020.521a

Rahmayantis, M. D., & Nurlailiyah, N. (2020). Pengembangan materi bahan ajar menulis puisi dengan menggunakan teknik pemodelan di SMPN 1 Tulungagung. KEMBARA: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya (e-Journal), 6(2), 243-254. doi: https://doi.org/10.22219/kembara.v6i2.14025

Saud, S., Jufri, A., Rahman, M. A., & Salam, S. (2014). Learning Devices Development on Descriptive Writing for Foreign Language Based on Berlo's SMCR Communication Model of Secondary School Student. *Journal of Language Teaching and Research*, *5*(5), 1033–1041. https://doi.org/10.4304/jltr.5.5.1033-1041

Setiawan, A., & Musaffak, M. (2021). Profil penelitian keterampilan membaca cepat pada jurnal pendidikan bahasa dan sastra Indonesia dalam PPJB-SIP. KEMBARA: Jurnal Keilmuan, Bahasa, Sastra dan Pengajarannya (e-Journal), 7(2), 463-475. https://doi.org/10.22219/kembara.v7i2.17889

Sujarwo, Sukmawati, Akhiruddin, Ridwan, & Siradjuddin, S. (2020). An Analysis of University Students' Perspective On Online Learning in The Midst of Covid-19 Pandemic. *Jurnal Pendidikan Dan Pengajaran*, *53*(2), 125. https://doi.org/DOI: https://doi.org/10.23887/jpp.v53i2.24964

Sunhaji. (2016). Teaching Model of Integrated Learning in the Islamic Religious Education of Rasise the Faith and Devotion of the Students of State's Senior Secondary Schools in Purwokerto City. *European Journal of Social Sciences*, *53*(4), 317–325.

Suzuki, S. N., Akimoto, Y., Suzuki, K., Okada, A., Hirata, K., Kato, T., Yajima, K., Kanematsu, H., Fukumoto, T., & Yoshikawa, F. (2020). Development of A-txt system compatible introductory teaching materials for Electric Power Engineering using gaming simulation. *Procedia Computer Science*, *176*, 1557–1566. https://doi.org/10.1016/j.procs.2020.09.167

Warren, S. J., Dondlinger, M. J., & Barab, S. A. (2008). A MUVE Towards PBL Writing: Effects of a Digital Learning Environment Designed To Improve Elementary Student Writing. *Journal of Research on Technology in Education (JRTE)*, *41*(1), 113–140.

Wilcox, K. C., Yagelski, R., & Yu, F. (2014). The nature of error in adolescent student writing. *Reading and Writing*, *27*(6), 1073–1094. https://doi.org/10.1007/s11145-013-9492-x

Yao, R., Zhang, G., Wang, Y., & Bie, R. (2022). Design of Teaching Material Evaluation Incentive Mechanism based on Game Theory. *Procedia Computer Science*, *202*, 47–54. https://doi.org/10.1016/j.procs.2022.04.007

Ziemba, P., Watrobski, J., Karczmarczyk, A., Jankowski, J., & Wolski, W. (2017). Integrated approach to e-commerce websites evaluation with the use of surveys and eye tracking based experiments. *Proceedings of the 2017 Federated Conference on Computer Science and Information Systems, FedCSIS 2017*, *11*, 1019–1030. https://doi.org/10.15439/2017F320