Eurasian Journal of Educational Research 100 (2022) 60-73

Eurasian Journal of Educational Research
www.ejer.com.tr

Writing Skills for Primary Students: Need Analysis to Implement the Scientific Approach

Veronika Unun Pratiwi[1], Andayani[2], Joko Nurkamto[3], Atikah Anindyarini[4]

ARTICLE INFO

Article History:
Received: 7 April 2022
Received in revised form: 9 June 2022
Accepted: 6 October 2022
DOI: 10.14689/ejer.2022.100.005

Keywords
Writing skills, student writing, scientific approach, writing improvement, writing performance.

ABSTRACT

Purpose: The study looks into how knowledge and critical thinking might help primary school pupils in Indonesia enhance their writing abilities. The scientific approach that teachers take to students' knowledge, critical thinking, and writing abilities is also examined in this study. **Design/methodology/approach:** This quantitative study used a five-point Likert scale to collect the data. The teachers involved in Indonesia's elementary education comprise the study's population. This study has a 397-person sample size, and Smart PLS 3.0 is used for data processing. **Findings:** The study found that raising student knowledge and critical thinking skills can increase writing proficiency among Indonesian primary school pupils. Additionally, this study looked into the best way for students writing abilities in Indonesia to grow. This was shown to be the teacher's use of a scientific method. **Research limitations/implications:** The research has excellent theoretical and practical ramifications that have enhanced our understanding of writing skills and offer a strategy for enhancing the writing abilities of primary kids using a scientific method. **Originality/value:** Because new relationships are formed in this research model, the novel framework of this study adds to our understanding of writing skills.

[1] Corresponding Author, Sebelas Maret University, Indonesia &, Veteran Bangun Nusantara University, Sukoharjo, Indonesia, Email: veronikaup@gmail.com; https://orcid.org/0000-0003-2679-7268
[2] Sebelas Maret University, Surakarta, Indonesia, Email: andayani@staff.uns.ac.id; https://orcid.org/0000-0001-9936-4223
[3] Sebelas Maret University, Surakarta, Indonesia, Email: retnowinarni@staff.uns.ac.id; https://orcid.org/0000-0001-1110-6890
[4] Sebelas Maret University, Surakarta, Indonesia, Email: atikahanindyarini@staff.uns.ac.id; https://orcid.org/0000-0001-9936-4223

1. Introduction

Their writing abilities significantly impact students' learning performance (Khair & Misnawati, 2022). This skill is not confined to classroom activities; writing also aids pupils in achieving other objectives (Madeng, 2019). The pupils' learning is divided into stages. Thus it is crucial to boost their writing abilities starting in first grade (Limpo & Alves, 2017). Certain children can perform better in school activities if they have superior writing skills during their early learning stages (Semeraro et al., 2019). Additionally, teachers must improve pupils' writing abilities since this will help them study more effectively (Boekaerts & Rozendaal, 2007). Further, children with stronger learning strategies enhance their writing skills earlier due to their positive attitudes toward learning. However, primary-level children are not particularly driven to sharpen their writing abilities to boost their performance (Little et al., 2018).

Elementary school kids in Indonesian classrooms lack the necessary writing abilities (Khair & Misnawati, 2022). There is no possibility for pupils at government-run institutions to develop their writing abilities (Saputra, Tania, & Efkar, 2022). It is difficult for Indonesian pupils to learn traditionally. Students can increase their performance when they possess the necessary writing abilities, but they can also work hard (Saragih, Adisaputera, & Saragi, 2019). Because they think their kids' writing abilities are suitable for the basic level, primary school teachers are not doing enough to help their pupils' writing skills (Haerazi & Irawan, 2020). Yes, some primary school pupils are better writers than others, but for greater learning outcomes, they must constructively enhance their writing abilities (Toba & Noor, 2019). Indonesian teachers are not focusing on the scientific approach to teaching to benefit their students' better learning outcomes. Teachers play a crucial role in helping pupils enhance their writing abilities (Graham et al., 2019).

According to the study by Indrilla and Ciptaningrum (2018), teachers in the public sector of Indonesia place minimal value on their students' writing abilities. According to the research by Toba and Noor (2019), when kids are driven by their parents to enhance their academic achievement, their writing performance also increases. Similarly, Haerazi and Irwan's study (2020) found that students' writing ability improves when they are internally motivated, which is influenced by the stimuli. Additionally, the study by Sari, Utomo, and Astina (2021) found that when students work more effectively to enhance their learning performance, their writing improves. Additionally, the study by Saragih et al. (2019) showed that strongly motivated students to improve their writing performance might obtain a superior working methodology. Further, the study by Santosa, Basuki, and Puspita (2019) argued that while students should practice writing abilities over time to improve their writing, they should do so in stages.

It is clear from studies in the literature that many researchers' work has significantly expanded our understanding of writing abilities. These pupils, however, do not conceptualize the writing abilities of Indonesian primary kids methodically. As a result, there is a gap in our understanding of writing abilities. To enhance the writing abilities of Indonesian primary students, the research explores the effects of student knowledge and critical thinking. The scientific approach that teachers take to students' knowledge, critical thinking, and writing abilities is also examined in this study. As a result, this research has a glaring gap, and the model is built around this gap. Because new relationships are formed

in the research's novel framework, this knowledge of writing skills is expanded. Similarly, the study has excellent theoretical and practical ramifications that have developed our understanding of writing skills and provided a means of enhancing primary kids' writing skills through science. Scholars should continue to add to this model following the research's future goals.

2. Literature Review

According to the study by Indrilla and Ciptaningrum (2018), students' knowledge is crucial for their learning and writing since it gives them a direction for improving their learning performance. Similarly, Toba and Noor's study (2019) found that students' writing abilities would improve, provided they have the necessary skills to work on their writing practices. Furthermore, according to the research by Haerazi and Irawan (2020), students decide how well they will perform in their writing assignments depending on their skill level, which is important for learning and performance. Sari et al. (2021) also found that students' writing significantly impacts their performance. Still, their writing would improve if they worked on it scientifically while being supervised by their teachers. According to the study by Saragih et al. (2019), students who prioritize their writing abilities not only do better in class but also see improvements in their writing abilities over time. According to the research by Santosa et al. (2019), students who have adequate subject-matter knowledge write suitably because there is no ambiguity in their writing.

Additionally, Little et al. (2018)'s study stated that students need to have a firm grasp of the material because knowledge can help them write more effectively. Additionally, Khair and Misnawati's research from 2022 stated that teachers should give their pupils the right information to help them write more effectively, which is essential for the quality of their final products. Similarly to this, Boekaerts and Rozendaal (2007) study found that students' writing abilities would develop once they were prepared to put in the necessary effort to learn writing. Similarly, Semeraro et al. research from 2019 found that students' writing is crucial to their success and that parents must inspire their children to develop their writing style.

H1: *Student knowledge influences writing skills.*

According to the study by Haerazi et al. (2020), when students have the adequate subject knowledge, their critical thinking is suitable. According to the study by Madeng (2019), students must write better to do better because they cannot do it without the appropriate skills and topic understanding. Furthermore, the study conducted by Limpo and Alves (2017) found that students critical thinking strategies can help them perform better because they can accept new learning techniques thanks to this strategy. Additionally, according to the study (Limpo & Alves, 2017), students' critical thinking abilities are crucial for their learning because they consistently do better in reading and writing to comprehend the study's context. Graham et al. research's (2019) found that for students who are more adept at learning, their critical thinking skills need to be strengthened in a useful way to guarantee that logical arguments support their reading and writing.

Furthermore, the study by Madeng (2019) found that students' writing abilities are a better way to raise their performance since the capacity for critical thought enhances them.

According to Haerazi et al. (2020), pupils who can use critical thinking perform significantly better than other students who lack these skills. Additionally, the study by Semeraro et al. (2019) stated that parents should train their children to embrace new critical thinking and writing style to enhance their learning. Additionally, Boekaerts and Rozendaal (2007) study found that students' writing would improve if they learned to think critically about it. Additionally, Khair and Misnawati's study from 2022 found that students' ability to write critically is crucial to how well they learn.

H2: *Student critical thinking influences writing skills.*

Little et al. (2018)'s study concluded that a teacher's involvement is crucial to students' learning. The study by Saputra et al. (2022) clarified that teachers are a source of motivation for students and are influenced by their important techniques. According to Santosa et al. (2019) research's from 2019, when teachers use a scientific approach to teaching, pupils learn more effectively since it boosts student performance. According to the study by Saragih et al. (2019), students who are strongly motivated to improve their performance critically can benefit from a teacher's usage of scientific methodologies for better working and learning. According to Sari et al. (2021), instructors should have high expectations for their pupils and give them the tools and resources they need to succeed in school. According to the research by Haerazi and Irawan (2020), teachers that employ effective learning techniques always think about their students' usage of learning methodologies, which can help them write and read more effectively. According to the study by Indrilla and Ciptaningrum (2018), when teachers develop cutting-edge methods to use in the classroom to ensure that all children receive an equitable education, student learning performance can be enhanced.

Similarly, Toba and Noor's study from 2019 found that the instructor must oversee all of the class's activities, including the students' performance and output. He must introduce new teaching methods methodically to ensure pupils learn more effectively. According to the research by Limpo and Alves (2017), instructors with a positive attitude are enthusiastic about their students' education. These teachers can improve their students' performance by incorporating scientific modules into their lessons. Additionally, Graham et al. study .'s (2019) found that teachers' systematic working methods help children learn more effectively.

H3: *The teacher's scientific approach moderates the relationship between student knowledge and writing skills.*

According to the study by Madeng (2019), the instructor plays a crucial role in classroom activities by inspiring the students to work hard and accomplish their objectives. In addition, Haerazi et al. (2020) found that teachers who are extremely driven for their students' performance must work creatively for their students' success. Semeraro et al. (2019).'s study also found that teachers can support students in developing their critical thinking by including them in various necessary activities. Indeed, Boekaerts and Rozendaal's study from 2007 found that teachers' involvement in student affairs is essential for classroom activities since students' performance cannot be improved without it. According to research by Khair and Misnawati (2022), students who are driven to succeed in their classes ask their lecturers for help enhancing their critical learning. However, Little et al. (2018)'s study found that teachers are crucial in helping students develop their critical thinking skills and that students' writing abilities are vital to improving their performance.

According to research by Saputra et al. (2022), students can learn more effectively when their teachers support their in-class performance.

Additionally, Santosa et al. (2019) study stated that teachers must use a scientific method while motivating pupils to improve their performance. Saragih et al. (2019) showed that when students were offered a better functional solution, their critical thinking and performance would enhance. Additionally, Sari et al. (2021) study from 2021 found that learning might be improved when teachers support their students' critical thinking skills. Further, according to Indrilla and Ciptaningrum (2018), a teacher can give pupils a better learning environment to develop their writing.

H4: The teacher's scientific approach moderates the relationship between students' critical thinking and writing skills.

The framework of this study is reported in Figure 1.

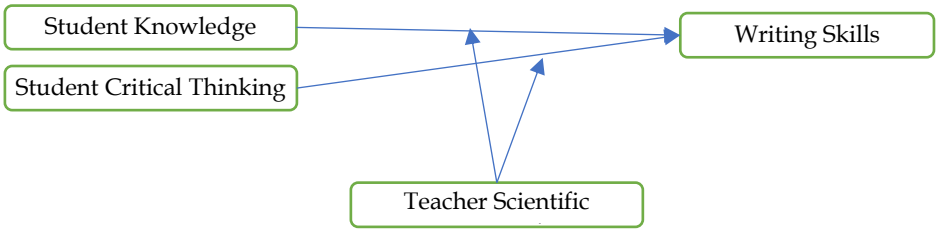

Figure 1. *Theoretical Framework*

3. Methodology

This study is based on "quantitative data" collected by Indonesian primary school teachers in various locations. Because these teachers are directly involved in instructing the pupils and assessing their performance, they are the "population" that is being targeted. Therefore, it is appropriate to gather information from the teachers about the students' writing talents and cognitive capacities to support this study's findings. To validate the results, the studies found in the literature also gathered information from the teachers. In addition, this study modified the "scale items" from Lin and Maarof (2013) to assess the direct influence of student knowledge on primary students' writing abilities. The "scale items" from O'Flaherty and Costabile (2020) were also modified for this study to assess the direct influence of student critical thinking on the writing abilities of elementary children.

4. Additionally, the scientific teaching method of the teacher served as a moderator in this study's adaptation of the "scale items" from Abadi, Pujiastuti, and Assaat (2017) to assess the influence of student knowledge on writing abilities. Additionally, this study used the Farzizadeh and Bahareh (2012) test to examine how writing abilities fit into the research paradigm. A five-point Likert scale was used for the questionnaire since similar "rating scales" were used for data collection and analysis in research discovered in the literature. Accordingly, the "simple random sampling technique" has been used in this research to gather data since it is proper to do so when the study population is known. To collect information for the final analysis, the teachers were contacted at several primary-level educational institutions in Jakarta, the capital of Indonesia. In this study, "Smart PLS" is also employed as a tool for data analysis.

5. Data Analysis

The first step of the research examined "data normality" and used "Smart PLS" for data analysis. According to Royston (1992), "kurtosis is a measure of whether the data are heavy-tailed or light-tailed relative to a normal distribution, and skewness is a measure of symmetry, or more specifically, the lack of symmetry." The author Field (2013) further explained that "a general guideline for skewness is that if the number is greater than +1 or lower than -1, this is an indication of a substantially skewed distribution, and the general guideline for kurtosis is that if the number is greater than +1, the distribution is too peaked." As a result, Table 1's findings show that the study's "data normality" is adequate.

Table 1

Data Normality

	Mean	Standard Deviation	Excess Kurtosis	Skewness
SK1	3.171	1.451	-0.309	0.090
SK2	3.153	1.710	-0.431	0.457
SK3	3.450	1.827	-0.620	0.386
SK4	3.392	1.824	-0.544	0.468
SK5	3.441	1.650	-0.212	0.361
SK6	3.374	1.727	-0.547	0.254
SCT1	3.387	1.741	-0.737	0.149
SCT2	3.608	1.834	-0.658	0.274
SCT3	3.622	1.806	-0.595	0.360
SCT4	3.572	1.899	-0.630	0.435
SCT5	3.473	1.835	-0.550	0.444
SCT6	3.523	1.840	-0.552	0.410
SCT7	3.509	1.850	-0.668	0.351
TSA1	3.441	1.772	-0.360	0.501
TSA2	3.446	1.851	-0.784	0.251
TSA3	3.392	1.772	-0.456	0.395
TSA4	3.563	1.738	-0.414	0.355
TSA5	2.959	1.390	0.202	0.661
WS1	3.023	1.330	1.040	0.883
WS2	3.090	1.267	1.381	0.927
WS3	3.036	1.352	0.775	0.771
WS4	2.995	1.300	0.576	0.591
WS5	3.023	1.324	0.458	0.545
WS6	3.000	1.291	0.718	0.708
WS7	2.928	1.387	-0.095	0.457

For "the correlation coefficient for the variable and factor," the study investigated "factor loadings." Factor loading "shows how well an item represents the underlying construct, and it must be over 0.70," according to Armstrong and Soelberg (1968). As a result, Table 2's data demonstrate that the research has accurate factor loadings.

Table 2

Factor Loadings

"Constructs	Indicators		FL
Student Critical Thinking	SCT1	I think a student with knowledge has critical thinking.	0.858
	SCT2	The student with critical thinking asks many questions.	0.885
	SCT3	The student has critical reasoning for each subject.	0.897
	SCT4	Students' critical think improves their learning.	0.925
	SCT5	The students learn better with critical thinking.	0.911
	SCT6	The student understands the concept better with critical reasoning.	0.870
	SCT7	I motivate the students to critically reasoning.	0.895
Student Knowledge	SK1	The knowledge of students reflects their learning performance.	0.889
	SK2	The student with knowledge is the best performers.	0.897
	SK3	Learning performance is possible with knowledge.	0.891
	SK4	The writing of students improves with their knowledge.	0.868
	SK5	Knowledge improvement is possible with teamwork.	0.883
	SK6	The classroom performance of students reflects their knowledge.	0.895
Teacher Scientific Approach	TSA1	The teachers may have a scientific approach to class.	0.860
	TSA2	Systematic learning can improve the performance of students.	0.874
	TSA3	The critical learning of students is improved with the teacher's strategies.	0.897
	TSA4	The best teachers are working scientifically to improve student performance.	0.878
	TSA5	A teacher can develop a scientific approach to classroom activities.	0.750
Writing Skills	WS1	Writing skills are based on knowledge.	0.867
	WS2	The writing of any student can be improved over time.	0.870
	WS3	Scientific writing is better for students.	0.883
	WS4	Writing skills can be developed in different steps.	0.900
	WS5	The writing of students is necessary for their better learning.	0.906
	WS6	The primary level students are better at writing.	0.905
	WS7	Writing performance should be improved by teachers."	0.872

The validity and reliability of the study were further examined using "Cronbach's alpha ()", "composite reliability (CR)", and "average variance extracted (AVE)". According to Tavakol and Dennick (2011), "Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are when taken as a whole. It is regarded as a gauge of scale dependability. "Composite reliability (CR > 0.70) is a measure of internal consistency in scale items, much like Cronbach's alpha," as established by de Freitas, de Oliveira, and de Oliveira (2019). "Average variance extracted (AVE > 0.50) is a measure of the amount of variance that is captured by a construct about the amount of variance due to measurement error," dos Santos and Cirillo (2021) showed. Figure 2 shows the results of Cronbach's alpha analysis. The results of additional criteria are also included in Table 3, which demonstrates the "reliability and validity" of the research.

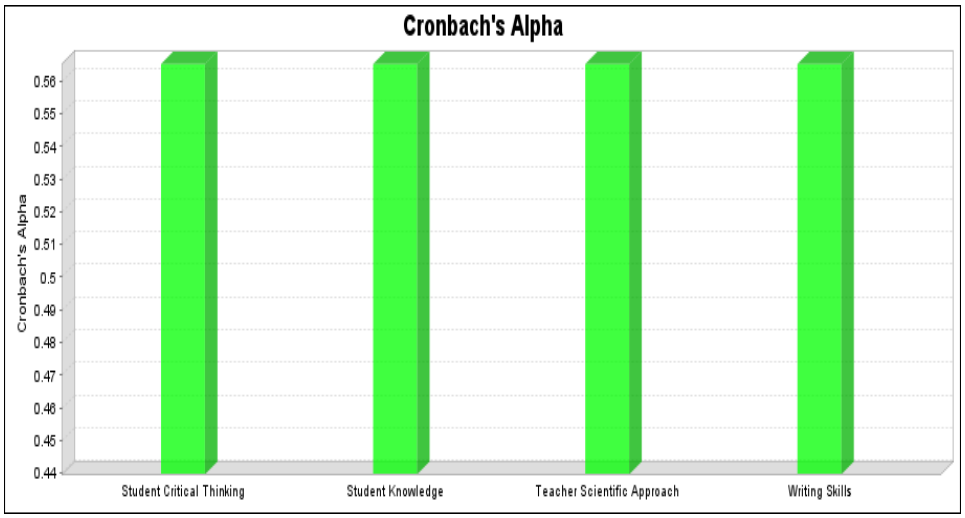

Figure 2. *Cronbach Alpha*

Table 3

Reliability and Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
Student Critical Thinking	0.957	0.964	0.795
Student Knowledge	0.946	0.957	0.787
Teacher Scientific Approach	0.907	0.93	0.728
Writing Skills	0.954	0.962	0.785

Discriminant validity, as established by Ab Hamid, Sami, and Sidek (2017), "tests whether concepts or measurements that are not supposed to be related are unrelated." Heteritrait-Monotrait (HTMT) is a gauge of similarity between latent variables, as Ab Hamid et al. (2017) showed. The HTMT criterion is debatable, as Gold, Malhotra, and Segars (2001) showed; most sources advise a value below 0.90. The results shown in Table 3 demonstrate that the research has an adequate "HTMT."

Table 4

HTMT

	Student Critical Thinking	Student Knowledge	Teacher Scientific Approach	Writing Skills
Student Critical Thinking				
Student Knowledge	0.876			
Teacher Scientific Approach	0.793	0.765		
Writing Skills	0.712	0.731	0.817	

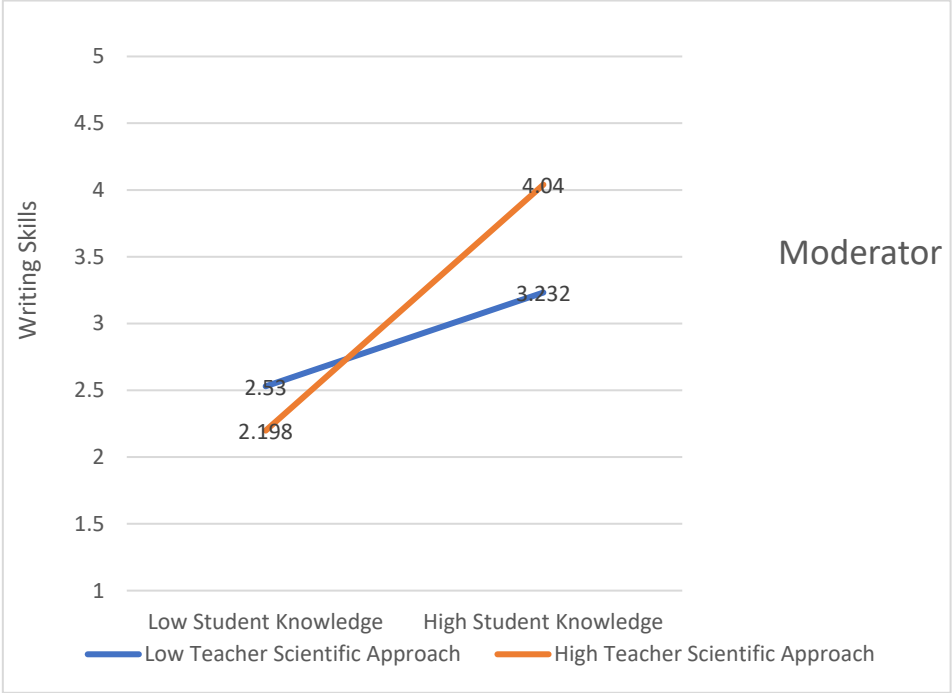

Figure 3. *Moderation of Teacher Scientific Approach between Student Knowledge and Writing Skills*

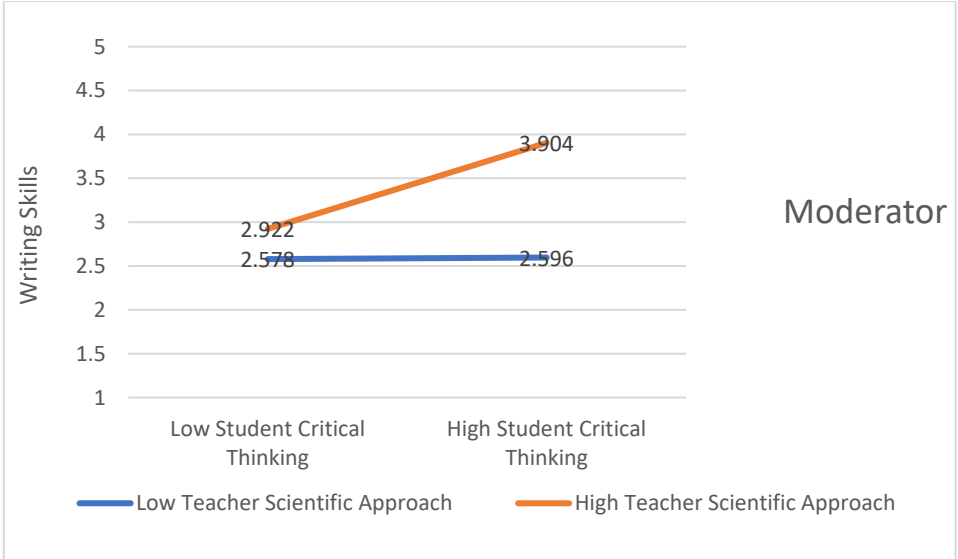

Figure 4. *Moderation of Teacher Scientific Approach between Student Critical Thinking and Writing Skills*

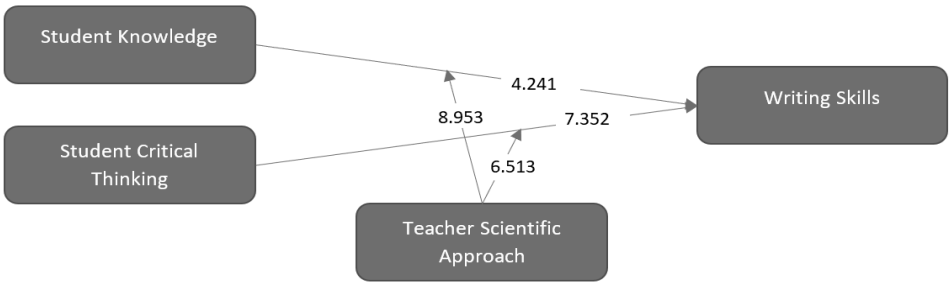

Figure 5. *Structural Model*

As recommended by Hair, Sarstedt, Pieper, and Ringle, "t > 1.96 and p < 0.05" are used to test the results of the hypotheses (2012). As a result, the results of H1 showed that student knowledge had a significant impact on their writing abilities. Second, the results of H2 showed that students' critical knowledge significantly impacts their writing abilities. Thirdly, the results of H3 showed that student knowledge significantly affects their writing abilities, with the teacher's scientific approach as a moderating factor. Additionally, the relationship between student knowledge and their writing abilities is positively strengthened by this moderation of the teacher's scientific approach (see Figure 3). Finally, the results of H4 showed that, with the scientific approach of the teacher serving as a moderator, student critical thinking significantly impacts their writing abilities. The teacher's moderation of her scientific approach strengthens the relationship between students' writing and necessary thinking abilities (see Figure 4). In this way, Table 5 and Figure 5's presented data demonstrate that the research has tested every significant hypothesis.

Table 5

Hypotheses Results

Path	Original Sample	Standard Deviation	T Statistics	P Values
Student Knowledge -> Writing Skills	0.636	0.150	4.241	0.000
Student Critical Thinking -> Writing Skills	0.250	0.034	7.352	0.000
Moderating Effect 1 -> Writing Skills	0.385	0.043	8.953	0.000
Moderating Effect 2 -> Writing Skills	0.241	0.037	6.513	0.000

6. Discussion

As recommended by Hair, Sarstedt, Pieper, and Ringle, "t > 1.96 and p < 0.05" are used to test the results of the hypotheses (2012). As a result, the results of H1 showed that student knowledge had a significant impact on their writing abilities. Second, the results of H2 showed that students' critical knowledge significantly impacts their writing abilities. Thirdly, the results of H3 showed that student knowledge significantly affects their writing abilities, with the teacher's scientific approach as a moderating factor. Additionally, the relationship between student knowledge and their writing abilities is positively strengthened by this moderation of the teacher's scientific approach (see Figure 3). Finally, the results of H4

showed that, with the scientific approach of the teacher serving as a moderator, student critical thinking significantly impacts their writing abilities. The teacher's moderation of her scientific approach strengthens the relationship between students' writing and critical thinking abilities (see Figure 4). In this way, Table 5 and Figure 5's presented data demonstrate that the research has tested every significant hypothesis.

7. Implementation

This study has theoretical significance since it significantly adds to our understanding of writing skills in ways that previous studies did not. This study made it known that the pupils' knowledge plays a crucial role in influencing the writing abilities of elementary school kids. Additionally, this study contributes to the body of knowledge regarding how pupils' critical thinking affects their writing abilities as primary students. The prior studies in the body of literature did not examine this association either. This study also showed that the scientific approach used by teachers to moderate the relationship between student knowledge and writing abilities improved elementary students' writing. In this way, the moderating link that the preceding studies had failed to explain is added to the body of knowledge.

Additionally, this study showed that the scientific approach used by teachers in the classroom had a moderating effect on the relationship between primary students' writing and critical thinking. The earlier studies could not fully explain this moderating link, a new addition to the body of knowledge. As a result, the research's model adds something fresh and original to the body of literature.

This study also showed that primary school teachers in Indonesia are needed to help their students improve their writing abilities. The study showed that teachers must emphasize the scientific method for pupils to enhance their writing because it benefits their learning. According to the study, teachers who continually assess their students' writing abilities and use a critical mindset can help them improve their writing performance. Additionally, the study claimed that teachers must work productively to improve their writing abilities. Indeed, teachers with superior working methods can improve their thinking skills for their output. According to the research, teachers who are particularly driven to aid primary students' writing skills should guide them in developing their critical thinking skills because it will benefit them in their learning techniques. Additionally, the study showed that using a scientifically created curriculum for the pupils can enhance their writing performance. To ensure that students are improving their writing more effectively, teachers must ensure that students are learning more and expanding their knowledge.

8. Future Directions

The study found that raising pupils' knowledge and critical thinking levels can boost their writing abilities at the primary school level in Indonesia. Additionally, this study looked into the best way for students' writing abilities in Indonesia to grow. This was shown to be the teacher's use of a scientific method. However, researchers can improve this model of student writing abilities in the next scholarly research projects. To further the literature, researchers must look at how student cognitive behavior affects both students' critical thinking and writing skills. This investigation would add to what is known about students' writing abilities.

Similarly, the researchers must examine how students' mental health affects their critical thinking and writing abilities. This is a novel addition to what is already known about students' writing abilities. Additionally, the researchers must look at how student motivation affects the relationship between their critical thinking and writing abilities. This is a brand-new addition to their understanding of students' writing abilities. Future research can add to the body of knowledge by moving in these ways.

References

Ab Hamid, M. R., Sami, W., & Sidek, M. H. M. (2017). Discriminant validity assessment: Use of Fornell & Larcker criterion versus HTMT criterion. *Journal of Physics: Conference Series, 890*(1), 012163. https://doi.org/10.1088/1742-6596/890/1/012163

Abadi, M. K., Pujiastuti, H., & Assaat, L. D. (2017). Development of teaching materials based interactive scientific approach towards the concept of social arithmetic for junior high school student. *Journal of Physics: Conference Series, 812*(1), 012015. https://doi.org/10.1088/1742-6596/812/1/012015

Armstrong, J. S., & Soelberg, P. (1968). On the interpretation of factor analysis. *Psychological Bulletin, 70*(5), 361–364. https://doi.org/10.1037/h0026434

Boekaerts, M., & Rozendaal, J. S. (2007). New insights into the self-regulation of writing skills in secondary vocational education. *Zeitschrift für Psychologie/Journal of Psychology, 215*(3), 164–173. https://doi.org/10.1027/0044-3409.215.3.164

de Freitas, D. S., de Oliveira, T. E., & de Oliveira, J. M. (2019). Sustainability in the Brazilian pampa biome: A composite index to integrate beef production, social equity, and ecosystem conservation. *Ecological indicators, 98*, 317-326. https://doi.org/10.1016/j.ecolind.2018.10.012

dos Santos, P. M., & Cirillo, M. Â. (2021). Construction of the average variance extracted index for construct validation in structural equation models with adaptive regressions. *Communications in Statistics-Simulation and Computation*, 1-13. https://doi.org/10.1080/03610918.2021.1888122

Farzizadeh, K. S., & Bahareh. (2012). The Relationship between Multiple Intelligences and Writing Ability of Iranian EFL Learners. *English Language Teaching, 5*(11), 136-142. http://dx.doi.org/10.5539/elt.v5n11p136

Field, A. (2013). *Discovering Statistics using IBM SPSS Statistics*. Sage Publications Ltd. https://dl.acm.org/doi/abs/10.5555/2502692

Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of management information systems, 18*(1), 185-214. https://doi.org/10.1080/07421222.2001.11045669

Graham, S., Harris, K. R., Fishman, E., Houston, J., Wijekumar, K., Lei, P.-W., & Ray, A. B. (2019). Writing skills, knowledge, motivation, and strategic behavior predict students' persuasive writing performance in the context of robust writing instruction. *The Elementary School Journal, 119*(3), 487-510. https://doi.org/10.1086/701720

Haerazi, H., Irawan, L., Suadiyatno, T., & Hidyatullah, H. (2020). Triggering preservice teachers' writing skills through genre-based instructional model viewed from creativity. *International Journal of Evaluation and Research in Education (IJERE), 9*, 234-244. https://doi.org/10.11591/ijere.v9i1.20395

Haerazi, H., & Irawan, L. A. (2020). Developing Intercultural Language Learning (ILL) model to teach writing skills at Indonesian private universities. *EduLite: Journal of English Education, Literature and Culture, 5*(1), 43-54. https://doi.org/10.30659/e.5.1.43-54

Hair, J. F., Sarstedt, M., Pieper, T. M., & Ringle, C. M. (2012). The use of partial least squares structural equation modeling in strategic management research: a review of past practices and recommendations for future applications. *Long range planning, 45*(5-6), 320-340. https://doi.org/10.1016/j.lrp.2012.09.008

Indrilla, N., & Ciptaningrum, D. S. (2018). Yan Approach in Teaching Writing Skills: Does It Offer a New Insight in Enhancing Students Writing Abilit. *LLT Journal: A Journal on Language and Language Teaching 21*(2), 124-133. https://doi.org/10.24071/llt.v21i2.1036

Khair, U., & Misnawati, M. (2022). Indonesian language teaching in elementary school: Cooperative learning model explicit type instructions chronological technique of events on narrative writing skills from interview texts. *Linguistics and Culture Review, 6*, 172-184. https://doi.org/10.21744/lingcure.v6nS2.1974

Limpo, T., & Alves, R. A. (2017). Written language bursts mediate the relationship between transcription skills and writing performance. *Written Communication, 34*(3), 306-332. https://doi.org/10.1177/0741088317714234

Lin, O. P., & Maarof, N. (2013). Collaborative writing in summary writing: Student perceptions and problems. *Procedia-Social and Behavioral Sciences, 90*, 599-606. https://doi.org/10.1016/j.sbspro.2013.07.131

Little, C. W., Clark, J. C., Tani, N. E., & Connor, C. M. (2018). Improving writing skills through technology-based instruction: A meta-analysis. *Review of Education, 6*(2), 183-201. https://doi.org/10.1002/rev3.3114

Madeng, M. (2019). *Using Dialogue Journals to Develop Less Able EFL Students' Writing Skills and Willingness to Write.* (Doctoral dissertation). Prince of Songkla University. https://kb.psu.ac.th/psukb/bitstream/2016/12560/1/435377.pdf

O'Flaherty, J., & Costabile, M. (2020). Using a science simulation-based learning tool to develop students' active learning, self-confidence and critical thinking in academic writing. *Nurse Education in Practice, 47*, 102839. https://doi.org/10.1016/j.nepr.2020.102839

Royston, P. (1992). Which measures of skewness and kurtosis are best? *Statistics in Medicine, 11*(3), 333-343. https://doi.org/10.1002/sim.4780110306

Santosa, A. B., Basuki, Y., & Puspita, A. M. I. (2019). The effectiveness of local wisdom-based teaching materials in enhancing creative writing skills of elementary school students. *Journal of English Language Teaching and Linguistics, 4*(3), 349-359. http://jeltl.org/index.php/jeltl/article/view/32

Saputra, A., Tania, L., & Efkar, T. (2022). Fostering Scientific Writing Skills of Vocational High School Teachers in Bandar Lampung, Indonesia. *Journal of Social Research and Community Service, 1*(1), 8-14. http://dx.doi.org/10.23960/jsrcs/v1i1.pp8-14

Saragih, J. Y., Adisaputera, A., & Saragi, D. (2019). The Effect of Reasoning Skills on Writing of Explanation Text Assessed from the Social Economic Status of Parents in Class VIII, SMP Negeri 2 Raya, Simalungun District, Indonesia. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal, 2*(3), 78-87. https://doi.org/10.33258/BIRLE.V2I3.354

Sari, Y. I., Utomo, D. H., & Astina, I. K. (2021). The Effect of Problem Based Learning on Problem Solving and Scientific Writing Skills. *International Journal of Instruction, 14*(2), 11-26. https://doi.org/10.29333/iji.2021.1422a

Semeraro, C., Coppola, G., Cassibba, R., & Lucangeli, D. (2019). Teaching of cursive writing in the first year of primary school: Effect on reading and writing skills. *PloS one, 14*(2), e0209978. https://doi.org/10.1371/journal.pone.0209978

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. *International journal of medical education, 2*, 53-55. https://dx.doi.org/10.5116/ijme.4dfb.8dfd

Toba, R., & Noor, W. N. (2019). The current issues of Indonesian EFL students' writing skills: Ability, problem, and reason in writing comparison and contrast essay. *Dinamika Ilmu, 19*(1), 57-73. https://doi.org/10.21093/di.v19i1.1506