



Correlation Between the Use of ChatGPT Among Teachers and Teaching and Learning in Primary Schools

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DOI: <https://doi.org/10.47772/IJRISS.2026.100700313>

Received: 15 July 2026; Accepted: 20 July 2026; Published: 31 July 2026

ABSTRACT

The advancement of Artificial Intelligence (AI) has significantly transformed the education sector, particularly through the use of ChatGPT as a supportive tool in teaching and learning processes. This study aimed to examine the relationship between teachers' usage of ChatGPT and students' learning skills, knowledge, and understanding in primary schools. A quantitative survey research design was employed involving 40 respondents. Data were collected using a five-point Likert scale questionnaire and analysed using the Statistical Package for the Social Sciences (SPSS) version 31 through descriptive analysis. The findings revealed that teachers' usage of ChatGPT was at a high level and contributed positively to the effectiveness of teaching and learning. Furthermore, students' learning skills, knowledge, and understandings were also found to be at high level, indicating a positive relationship between the use of ChatGPT and improved learning outcomes. In conclusion, ChatGPT has the potential to serve as an effective educational support tool in enhancing teachings and learning practices in primary schools, provided that it is used ethically and aligned with appropriate learning objectives.

Keywords: ChatGPT, Artificial Intelligence, Teachers, Teaching and Learning, Primary School.

INTRODUCTION

The development of digital technology and artificial intelligence (AI) has brought significant changes to various fields, including education. The emergence of digital applications, particularly ChatGPT, has opened up new avenues in the teaching and learning process due to its ability to generate information, answer questions, prepare instructional materials, and assist teachers in executing various academic tasks faster and more efficiently (Sallehuddin et al., n.d.). The use of this technology is increasingly gaining attention among educators due to its potential to enhance instructional effectiveness and support more interactive learning (Ramlie et al., 2023).

In the context of primary schools, teachers act as facilitators responsible for ensuring that the teaching and learning process runs effectively. The use of ChatGPT can assist teachers in planning learning activities, constructing assessment questions, preparing teaching aids, and generating creative ideas tailored to the students' level. Additionally, this technology helps save teachers' time in preparing instructional materials, thereby allowing them to focus more on student learning development (Geoffrey F. C. Lim et al., 2025).

However, the use of ChatGPT in education also raises several issues, such as information accuracy, over-reliance on technology, and challenges in ensuring academic integrity (Johan et al., 2025). Therefore, the application must be regulated and utilized ethically to exert a positive impact on the teaching and learning process. Research regarding the use of ChatGPT in education shows that this technology holds immense potential to enhance teaching effectiveness if used wisely and in alignment with learning objectives (Tlili et al., 2023).

Accordingly, this study was conducted to identify the correlation between the application of ChatGPT among teachers and teaching and learning in primary schools. This study is crucial to provide a clearer overview of



the relationship between ChatGPT use and teaching effectiveness, as well as to contribute to the improvement of educational practices in line with technological advancements and 21st-century educational needs.

LITERATURE REVIEW

The Use of ChatGPT in Education

In line with the development of digital technology, ChatGPT is increasingly gaining attention as a tool that can help teachers generate information, prepare teaching materials, and plan more engaging learning activities. According to Kharis (2024), the use of ChatGPT in education can increase teachers' efficiency in preparing instructional materials and support a more flexible and interactive learning process. Furthermore, Mohamad Shaufi bin Kamaruddin (2023) stated that the use of ChatGPT has the potential to help teachers deliver information more effectively and promote student-centered learning.

Nevertheless, the use of ChatGPT must be implemented prudently to ensure that the information obtained is accurate and appropriate for the learning objectives. Therefore, studies regarding the relationship between ChatGPT usage and student learning aspects need to be conducted to understand its impact more deeply (Munaye et al., 2025).

The Relationship Between ChatGPT Use and Students' Learning Skills

Learning skills refer to students' capacity to master learning strategies that help them acquire, process, and apply knowledge effectively. The use of ChatGPT can help enhance learning skills through the rapid provision of information, self-directed learning support, and opportunities to explore various sources of knowledge. According to Ahmad (2023), the use of AI-based chatbots in education is capable of increasing student engagement in learning activities as well as promoting critical thinking and problem-solving.

A study by Geoffrey (2025) also found that using ChatGPT as a learning support tool can help students develop skills in information seeking, content analysis, and reflecting on their learning. Therefore, the use of ChatGPT by teachers is expected to have a positive relationship with students' learning skills.

The Relationship Between ChatGPT Use and Students' Knowledge

Knowledge refers to the mastery of facts, concepts, and information acquired through the learning process. In the educational context, ChatGPT can function as an additional information source that helps teachers deliver learning content more easily and engagingly. Masliza (2024) explained that ChatGPT is capable of providing diverse explanations according to the user's level of comprehension, thereby helping students acquire new knowledge more effectively.

In addition, generative AI technology can enhance student access to information and support self-directed knowledge construction (Hamidee & Ridzuan, 2025). This indicates that the use of ChatGPT among teachers has the potential to increase students' knowledge levels through more systematic and easily understandable information delivery.

The Relationship Between ChatGPT Use and Students' Understanding

Understanding is the ability of students to interpret, elaborate on, and explain a concept they have learned. The use of ChatGPT enables teachers to provide additional explanations, diverse examples, and immediate feedback to students. According to Masliza (2024), ChatGPT's ability to explain concepts in various forms helps students understand learning content more deeply.

Furthermore, Ahmad (2023) stated that interactions between students and AI chatbots can support active learning because students have the opportunity to pose questions and receive immediate responses. This



situation can enhance students' understanding of the topics studied and help them overcome learning difficulties.

Research Objectives

1. To identify the relationship between the use of ChatGPT among teachers and students' learning skills.
2. To examine the relationship between the use of ChatGPT among teachers and students' knowledge.
3. To examine the relationship between the use of ChatGPT among teachers and students' understanding.

Research Questions

1. What is the level of the relationship between the use of ChatGPT among teachers and students' learning skills?
2. Is there a relationship between the use of ChatGPT among teachers and students' knowledge?
3. Is there a relationship between the use of ChatGPT among teachers and students' understanding?

METHODOLOGY

This questionnaire contains four main sections. Section A comprises respondents' demographic information such as gender, age, and teaching experience. Section B contains items related to the relationship between the use of ChatGPT among teachers and students' learning skills.

Next, Section C focuses on the relationship between the use of ChatGPT among teachers and students' knowledge. Meanwhile, Section D contains items examining the relationship between the use of ChatGPT among teachers and students' understanding. Respondents were asked to provide feedback on each item using a five-point Likert scale, namely Scale 1 (Strongly Disagree), Scale 2 (Disagree), Scale 3 (Neutral), Scale 4 (Agree), and Scale 5 (Strongly Agree).

The obtained data were analysed using the Statistical Package for the Social Sciences (SPSS) version 31 software. Descriptive analysis involving frequency, percentage, mean, and standard deviation was used to describe the respondents' profile and the level of ChatGPT usage. Subsequently, Pearson correlation analysis was employed to identify the relationship between the use of ChatGPT among teachers and students' learning skills, knowledge, and understanding.

FINDINGS AND DISCUSSION

Table 1 shows the level of ChatGPT usage among teachers based on feedback from 40 respondents ($n = 40$). Overall, the findings indicate that the use of ChatGPT among teachers is at a high level, with mean values ranging from 3.85 to 4.45. This demonstrates that the majority of teachers accept and use ChatGPT as a support tool in the teaching and learning process.

The item that recorded the highest mean value was B5, which is "ChatGPT helps increase the effectiveness of my teaching" (Mean = 4.45, SD = 0.749), followed by item B4 regarding the use of ChatGPT to obtain ideas for learning activities (Mean = 4.35, SD = 0.622) and item B2 regarding the production of teaching aids (Mean = 4.25, SD = 0.707). Additionally, item B6 showed that teachers frequently use ChatGPT for teaching and learning matters (Mean = 4.15, SD = 1.051), while item B3 indicated that using ChatGPT to construct exercise or assessment questions was also at a high level (Mean = 3.95).

However, item B1, which relates to using ChatGPT to prepare Daily Lesson Plans (RPH), recorded the lowest mean value (Mean = 3.85, SD = 1.167), though it still remained at a high level. Overall, the research findings prove that teachers hold a positive perception toward the use of ChatGPT and utilize it in various aspects of teaching and learning, such as preparing teaching aids, constructing assessments, lesson planning, and searching for ideas for learning activities.

**Table 1: ChatGPT Usage Among Teachers**

BIL	Item	STS (%)	TS (%)	N (%)	S (%)	SS (%)	Min	SP
B1	I use ChatGPT to prepare Daily Lesson Plans (RPH).	2 (5.0%)	3 (7.5%)	9 (22.5%)	11 (27.5%)	15 (37.5%)	3.85	1.16
B2	I use ChatGPT to produce teaching aids.	-	1 (2.5%)	3 (7.5%)	21 (52.5%)	15 (37.5%)	4.25	.70
B3	I use ChatGPT to construct exercise or assessment questions.	2 (5.0%)	4 (10.0%)	5 (12.5%)	12 (30.0%)	17 (42.5%)	3.95	.19
B4	I use ChatGPT to obtain ideas for learning activities.	-	-	3 (7.5%)	20 (50.0%)	17 (42.5%)	4.35	.62
B5	ChatGPT helps increase the effectiveness of my teaching.	-	1 (2.5%)	3 (7.5%)	13 (32.5%)	23 (57.5%)	4.45	.74
B6	I frequently use ChatGPT for matters related to teaching and learning.	1 (2.5%)	4 (10.0%)	1 (2.5%)	16 (40.0%)	18 (45.0%)	4.15	1.05

Based on Table 2, which measures the aspects of Students' Skills and Knowledge, the overall findings show that students provided a positive perception toward the skills and knowledge acquired. The mean values for all items were at a high level, ranging between 3.875 and 4.300, indicating that the majority of respondents agreed that the studied approach could enhance their skills and knowledge.

The item that obtained the highest mean value was C1 (Mean = 4.300, SD = 0.911), which is that students can search for information more effectively. In addition, item C8 (Mean = 4.300, SD = 0.791) also recorded a high score, showing that students are capable of connecting existing knowledge with new knowledge. Items C5 (Mean = 4.225), C2, and C6 (Mean = 4.200) also showed that students agreed the approach helped them acquire new knowledge, find information more effectively, and understand facts more quickly.

However, item C3 recorded the lowest mean value (Mean = 3.875, SD = 1.017) compared to other items, though it was still at a high level. This finding indicates that the aspect of improving critical thinking skills can still be further strengthened. Overall, the results prove that the approach used successfully enhanced students' skills and knowledge, particularly in terms of information seeking, acquiring new knowledge, and mastering learning content.

Table 2: Students' Skills and Knowledge

No	Item	STS (%)	TS (%)	N (%)	S (%)	SS (%)	Min	SP
C1	Students can search for information more effectively.	-	3 (7.5%)	3 (7.5%)	13 (32.5%)	21 (52.5%)	4.30	.91



C2	Students can search for information more effectively.	-	3 (7.5%)	2 (5.0%)	19 (47.5%)	16 (40.0%)	4.20	.85
C3	Students can improve their critical thinking skills.	-	6 (15.0%)	5 (12.5%)	17 (42.5%)	12 (30.0%)	3.87	1.01
C4	Students can actively involve themselves in learning activities.	-	4 (10.0%)	3 (7.5%)	20 (50.0%)	13 (32.5%)	4.05	.90
C5	Students can acquire new knowledge more easily.	-	3 (7.5%)	2 (5.0%)	18 (45.0%)	17 (42.5%)	4.22	.86
C6	Students can understand facts and information more quickly.	-	4 (10.0%)	-	20 (50%)	16 (40.0%)	4.20	.88
C7	Students can improve their mastery of the lesson content studied.	-	5 (12.5%)	2 (5.0%)	19 (47.5%)	14 (35.0%)	4.05	.95
C8	Students can connect existing knowledge with new knowledge.	-	2 (5.0%)	2 (5.0%)	18 (45.0%)	18 (45.0%)	4.30	.79

Based on Table 3, the overall findings indicate that the level of student understanding is at a high level. The mean values for all items ranged between 4.200 and 4.350, signifying that the majority of students agreed that the approach used helped them understand their learning better.

Item D1 recorded the highest mean value of 4.350 (SD = 0.893), showing that students could understand the lesson content more easily. Additionally, items D3 and D5 each obtained a mean value of 4.300, indicating that students were able to summarize the lesson content and answer questions based on the comprehension achieved. Item D6 recorded a mean value of 4.225 (SD = 0.768), showing that students could apply the learned concepts well.

However, items D2 and D4 recorded slightly lower mean values of 4.200, but remained at a high level. This finding shows that students also agreed they could understand difficult concepts better and re-explain the lesson content they had learned. Overall, the research results prove that the approach used successfully increased students' level of understanding regarding lesson content, concepts learned, and their ability to apply knowledge in learning.

Table 3: Student Understanding

No	Item	STS (%)	TS (%)	N (%)	S (%)	SS (%)	Min	SP
D1	Students can understand the lesson content more easily.	-	3 (7.5%)	2 5.0%	13 (32.5%)	22 (55.0%)	4.35	.89
D2	Students can understand difficult concepts better	-	1	5	19	15	4.20	.75



			(2.5%)	(12.5%)	(47.5%)	(37.5%)		
D3	Students can summarize the lesson content studied.	-	2 (5.0%)	2 (5.0%)	18 (45.0%)	18 (45.0%)	4.30	.79
D4	Students can re-explain the lesson content they have learned.	-	2 (5.0%)	3 (7.5%)	20 (50.0%)	15 (37.5%)	4.20	.79
D5	Students can answer questions based on the comprehension achieved.	-	3 (7.5%)	3 (7.5%)	13 (32.5%)	21 (52.5%)	4.30	.91
D6	Students can apply concepts learned in new situations.	-	2 (5.0%)	2 (5.0%)	21 (52.5%)	15 (37.5%)	4.22	.76

Correlation Analysis of Relationship: The Use of ChatGPT Among Teachers and Students' Learning Skills

An inferential analysis using the Pearson Correlation test was conducted to examine the relationship between the use of ChatGPT among teachers and students' learning skills. Based on the analysis results, there is a very strong and significant positive relationship between both variables, with a correlation coefficient value of $r = 0.847$ and $p < 0.001$ ($N = 40$). This indicates that the higher the use of ChatGPT among teachers, the higher the level of students' learning skills. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted.

Table 4: Correlation Analysis of the Relationship between the Use of ChatGPT Among Teachers and Students' Learning Skills

		ChatGPT Use	Student Skills
ChatGPT Use	Pearson Correlation	1	.847**
	Sig. (2-tailed)		<.001
	N	40	40
Student Skills	Pearson Correlation	.847**	1
	Sig. (2-tailed)	<.001	
	N	40	40

**. Correlation is significant at the 0.01 level (2-tailed).

Correlation Analysis of Relationship: The Use of ChatGPT Among Teachers and Students' Knowledge

The Pearson correlation table shows that there is a very strong positive relationship between the use of ChatGPT among teachers and students' knowledge, where $r = 0.823$ with a value of $p < 0.001$ and $N = 40$. The correlation coefficient value ($r = 0.823$) shows that the higher the level of ChatGPT usage among teachers, the higher the level of students' knowledge.



Additionally, the significance value $p < 0.001$ is smaller than the established significance level of 0.05. Therefore, this result indicates that the relationship between the two variables is statistically significant. This means that the null hypothesis (H_0), which states that there is no relationship between the use of ChatGPT among teachers and students' knowledge, is rejected, while the alternative hypothesis (H_1) is accepted.

Overall, these findings prove that the use of ChatGPT among teachers has a positive and very strong relationship with students' knowledge. The use of ChatGPT as an instructional support tool has the potential to help teachers deliver information more effectively, thereby increasing the level of students' knowledge in the teaching and learning process.

Table 5: Correlation Analysis of the Relationship between the Use of ChatGPT Among Teachers and Students' Knowledge Skills

		ChatGPT Use	Student Knowledge
ChatGPT Use	Pearson Correlation	1	.823**
	Sig. (2-tailed)		<.001
	N	40	40
Student Knowledge	Pearson Correlation	.823**	1
	Sig. (2-tailed)	<.001	
	N	40	40

** . Correlation is significant at the 0.01 level (2-tailed)

Correlation Analysis of Relationship: The Use of ChatGPT Among Teachers and Students' Understanding

An inferential analysis using the Pearson Correlation test was conducted to examine the relationship between the use of ChatGPT among teachers and students' understanding. Based on the analysis results, there is a strong and significant positive relationship between both variables, with a correlation coefficient value of $r = 0.760$ and $p < 0.001$ ($N = 40$).

This indicates that the higher the use of ChatGPT among teachers, the higher the level of students' understanding. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_1) is accepted.

Table 6: Correlation Analysis of the Relationship between the Use of ChatGPT Among Teachers and Students' Understanding

		ChatGPT Use	Student Understanding
ChatGPT Use	Pearson Correlation	1	.760**
	Sig. (2-tailed)		<.001
	N	40	40
Student Understanding	Pearson Correlation	.760**	1



	Sig. (2-tailed)	<.001	
	N	40	40

**. Correlation is significant at the 0.01 level (2-tailed).

Significance of The Study

This study is important in providing guidance to teachers regarding the use of AI technology like ChatGPT in teaching and learning. Furthermore, the findings of this study can assist schools and policymakers in planning more effective learning strategies aligned with the needs of 21st-century education.

CONCLUSION

In conclusion, this study shows that the use of ChatGPT among teachers holds positive potential in supporting the teaching and learning process in primary schools. The utilization of this artificial intelligence technology can assist teachers in preparing instructional materials, generating ideas, planning lesson activities, and enhancing the effectiveness of delivering knowledge to students. The research findings also indicate that there is a relationship between the use of ChatGPT and aspects of students' learning skills, proving that this technology can serve as a supportive medium in contemporary education.

However, the use of ChatGPT must be carried out in a controlled and ethical manner so that it does not entirely replace the role of teachers in the educational process (Ai et al., 2025). Teachers need to play a vital role in evaluating the suitability of the information provided and ensuring its use aligns with learning objectives. Therefore, exposure and training related to the use of artificial intelligence technology should be provided to educators so that ChatGPT can be utilized optimally.

Overall, ChatGPT is an innovation capable of helping to improve the quality of teaching and learning if utilized with the right approach. The integration of this technology not only eases teachers' tasks but also has the potential to create a more engaging, creative, and effective learning experience for students.

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