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Making Peace with Change: The Effect of GPT Chat Utilization on the Performance of Islamic Religion Teachers in Creating Teaching Modules

Syamsul Kurniawan[1]✉, Saifuddin Herlambang[2], Nopita Sari[3], Fikri Fadian[4], Bayu Suratman[5], Vibry Andina Nurhidayah[6], Abdel Kadir Naffati[7], Torikoh[8]
[1,2,3,4,6]Institut Agama Islam Negeri Pontianak, Pontianak, Indonesia
[5]Universitas Islam Negeri Sunan Kalijaga, Yogyakarta, Indonesia
[7]University of Ez-Zitouna, Tunisia
[8]Sekolah Tinggi Ilmu Ekonomi Mahardhika, Surabaya, Indonesia

ABSTRACT

Purpose – This study aims to explore the effect of GPT Chat utilization on the performance of Islamic religion teachers in making teaching modules. Specifically, this study examines (1) the performance of Islamic religion teachers before utilizing Chat GPT, (2) how the utilization of Chat GPT by Islamic religion teachers, (3) the performance of Islamic religion teachers after utilizing Chat GPT, and (4) whether there is a significant effect of utilizing Chat GPT on teacher performance in making teaching modules.

Design/methods/approach – This research uses a quantitative approach with a pre-experiment design. Data collection tools include questionnaires, observation guidelines, and documentation. Hypothesis testing was conducted through normality tests (Kolmogorov-Smirnov and Shapiro-Wilk) and non-parametric tests (Wilcoxon) to measure significant differences between pretest and posttest results.

Findings – The findings of this study indicate that the use of Chat GPT affects the performance of Islamic religion teachers in making teaching modules.

Research implications/limitations – This study shows that the utilization of Chat GPT significantly improves teacher performance in doing Islamic religious education teaching modules. However, this study has limitations because of the small sample size of only 22 teachers. Future research can expand the scope by involving a larger sample and other education levels.

Originality/value – This study provides empirical evidence of the transformative potential of digital technologies in Islamic religious education practice and offers insights into how teachers can integrate AI technologies to improve Islamic religious education teaching strategies and learning outcomes.

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CONTACT: ✉syamsulkurniawan001@gmail.com

Introduction

This century teaches us one thing for sure: change is inevitable (Kurniawan, 2020). Life amid the Industrial Revolution 4.0 brings a wave of technological revolution that shakes various aspects of life. This change flows into every space, shifting the paradigm of work, needs, skills, and patterns of human interaction. The education sector is undoubtedly one of the areas most affected by this flow of change (Fonna, 2019; Heriyanto et al., 2019; Idayatun, 2020; M. Fajar Sidik et al., 2024). This prediction has long been echoed. Marc Prensky, a thinker in the digital era, foresaw a significant shift in the way learning and teaching would take place in the early 21st century. In his view, learners and educators born in the digital age have different mindsets and ways of interacting than previous generations. Prensky emphasized digital technology's importance in creating more relevant, engaging and effective learning. He reminded that educators, including Islamic religion teachers, must make peace with technology to carry out education to the demands of the times (Prensky, 2001; 2012).

Digital technology is a challenge and an excellent opportunity for educational innovation in this century. With its ability to cut costs and time, digital technology expands access to education to a broader cross-section of society. This transformation opens up new possibilities to create a more dynamic learning ecosystem (Hidayat et al., 2021; Kurniawan, 2019). However, to achieve this, awareness of the importance of making peace with technology is non-negotiable (Hardiman, 2021; Haryatmoko, 2020; Indrawati & Kuncoro, 2021; Zain, 2021).

This awareness has a strong spiritual foundation in the Qur'an, specifically in Qs. Ar-Rahman verse 33. This verse teaches that although humans have limitations, they are given the ability to exceed these limits through science and technology (Ministry of Religious Affairs, 2015). This verse is an important reminder for educators, including Islamic religion teachers, to see technology as a tool that can help improve the quality of learning (Shihab, 2008).

In the Indonesian context, the 1945 Constitution Article 31 Paragraph 5 emphasizes advancing science and technology while upholding religious values and national unity. This principle underlines that advances in digital technology are not only an object of learning but also an integrated tool in the educational process itself (Fonna, 2019; Sasikirana, 2020). Islamic religion teachers, as part of the education system, are expected to be able to utilize this technology to support the learning process (Hidayat et al., 2021b; Kurniawan, 2020; Septiani Selly Susanti et al., 2024). Technological transformation brings sophisticated hardware and software to the classroom. Increased connectivity creates new opportunities to build innovative and engaging learning environments (Haryatmoko, 2020). It can be understood that digital technology is one of the leading solutions for facing educational challenges in the era of the Industrial Revolution 4.0. This technology can support teachers and students in developing 21st-century skills (Kurniawan, 2019, 2020).

For this reason, Islamic religious teachers need to integrate technology into their learning. Using technologies such as artificial intelligence-based chatbots, including Chat GPT, offers great potential to support teacher performance. Chat GPT can be an effective

tool in creating teaching modules with its ability to understand context and generate text contextually. This technology allows teachers to create more relevant and engaging materials in less time (Serdianus & Saputra, 2023). Chat GPT is a technology developed by OpenAI that is designed to generate text with high accuracy. In education, this technology helps teachers in various aspects, such as providing suggestions for teaching strategies, learning approaches, and appropriate learning indicators. Its use allows teachers to focus on teaching quality while saving time and effort (Romadhoni, 2024; Serdianus & Saputra, 2023; Suharmawan, 2023).

In the Mempawah District, utilizing technology such as Chat GPT is still challenging for most Islamic Religious Education teachers. Observations and interviews show that although schools in this area have implemented the Merdeka Curriculum, many teachers face obstacles in creating teaching modules that are relevant to the curriculum. One of the main problems is time constraints due to busy teaching schedules and other administrative tasks. In addition, many teachers face technical difficulties in developing creative and innovative teaching modules. The main obstacles are the lack of skills in using digital technology and the lack of available references. Some teachers even admitted having difficulty using tools such as laptops, so they had to ask others for help completing their tasks.

This problem shows the importance of utilizing technology such as Chat GPT in creating teaching modules. With its advanced capabilities, Chat GPT can help teachers select relevant learning materials, find reliable references, and compile teaching modules more efficiently. This technology offers a practical solution to overcome the various limitations Islamic religion teachers face in the area. However, despite its many advantages, Chat GPT is not without limitations. This technology can only provide suggestions based on data that has been inputted previously, so it still requires manual ability from the teacher to evaluate and adjust the material. Therefore, Chat GPT should be viewed as a tool, not a substitute for teacher competence.

Integrating artificial intelligence (AI), particularly tools such as Chat GPT, in educational practice has gained significant attention in recent years. This literature review synthesizes relevant studies to explore the influence of AI on Islamic religious education teachers' performance in developing teaching modules, emphasizing the transformative potential of AI technologies in improving educational outcomes. AI technologies, including Chat GPT, are increasingly recognized for their ability to automate administrative tasks and provide data-driven insights. This allows educators to focus more on instructional leadership and innovation in the classroom. Ghamrawi highlights that AI can significantly improve teacher leadership by freeing up their time to engage in mentoring activities and instructional strategies, which are critical for effective teaching practices (Ghamrawi et al., 2024). This view aligns with the findings of Zulkarnain and Yunus, who stated that teachers' perceptions of AI technology influence their teaching strategies and behaviours, ultimately improving teaching and learning (Zulkarnain & Yunus, 2023). Moreover, Akavova underlined that integrating AI in education, such as through adaptive learning systems,

facilitates personalized learning experiences and supports teachers in improving their pedagogical approaches (Akavova et al., 2023).

The literature also shows that teachers' attitudes towards AI strongly influence their willingness to adopt these technologies in their teaching practices. Pörn's research revealed that while teachers recognized the potential benefits of AI for personalized assessment, they also expressed concerns about over-reliance on the technology (Pörn et al., 2024). This perspective resonates with Lérias' research, which emphasizes the need for educators to develop AI literacy to effectively utilize these tools in teaching (Lérias et al., 2024). The ability to critically understand AI technologies is crucial for teachers, as this allows them to navigate the complexities of integrating AI into the curriculum while addressing ethical considerations (Boulay, 2023).

In addition, the role of professional development in improving teachers' AI competencies cannot be ignored. Research by Zhao et al. shows that targeted training programs can significantly improve teachers' AI literacy, increasing their confidence and effectiveness in AI tools (Zhao et al., 2024). This is particularly relevant for Islamic religious education teachers, who may need specialized training to adapt AI technologies to their pedagogical context. Guptas findings support this idea, suggesting that educators must adapt their methodologies as AI evolves to maintain effective teacher-student dynamics (Gupta et al., 2024).

In conclusion, integrating AI tools such as Chat GPT in Islamic religious teacher education practice presents opportunities and challenges. While these technologies can improve teaching performance and facilitate the development of practical teaching modules, educators must keep abreast of professional developments to utilize their potential fully. The literature confirms the importance of cultivating positive attitudes towards AI, improving AI literacy, and providing adequate training to ensure teachers can effectively integrate these technologies into their teaching practices.

This article offers a more specific perspective than previous studies on artificial intelligence in education. Although studies on the use of AI, including Chat GPT, in education have started to emerge, it is still very rare to examine its influence on the performance of Islamic religion teachers, especially in creating teaching modules. This article aims to fill that void by focusing on an often overlooked aspect: how this technology can be a practical solution to improve the efficiency and quality of teaching of Islamic religion teachers in primary schools. In addition, this research is different regarding social settings because it explores data and findings from the local context in Segedong Sub-district, Mempawah Regency. This research focuses on primary school teachers of Islamic Religious Education who are members of the Teachers Working Group (KKG). This context provides a unique perspective, reflecting teachers' specific challenges and needs in their efforts to adopt new technologies. This research makes a theoretical contribution and offers practical implications relevant to improving the quality of learning in a region with distinctive social and educational dynamics.

Methods

This study used a quantitative approach with a pre-experiment One-Group Pretest-Posttest Design to evaluate the effect of Chat GPT on Islamic religion teachers' performance in creating teaching modules. This approach allows researchers to compare teachers' performance before and after the intervention of using Chat GPT. The data sources in this study are Islamic Religious Education subject teachers in elementary schools in Mempawah Regency, West Kalimantan Province, Indonesia.

The research instruments included questionnaires, observation guidelines, and documentation. The questionnaire was used to measure the extent to which Chat GPT influenced teacher performance, while the observation guideline recorded the steps of using Chat GPT in detail. Documentation collected evidence of the research implementation, such as examples of teaching modules produced before and after the intervention. All instruments were developed based on the research variables with relevant indicators and validated through content validity testing using Gregory's method and input from material experts. To ensure consistency of measurement, instrument reliability was tested using the Cronbach Alpha formula.

Data was collected using indirect communication methods through questionnaires, structured observation, and systematic documentation. Data from the pretest and posttest were analyzed using descriptive and inferential statistical approaches. Data processing was conducted with SPSS software, which included the Kolmogorov-Smirnov normality test to check data distribution and the Wilcoxon test to identify significant differences between teacher performance before and after using Chat GPT. This approach provides a solid analytical framework for evaluating the effectiveness of Chat GPT as a tool for improving the quality of teaching modules created by Islamic religion teachers while ensuring that the research results have adequate validity and reliability.

Result and Discussion

1. Content Validity of GPT Chat Utilization by Islamic Religious Education Teachers

In connection with the content validity of the utilization of Chat GPT, the author calculates the overall validity related to the utilization of Chat GPT by Islamic religion teachers using the Gregory formula as follows:

Table 1. Overall Validation Results of Observation Guidelines

		Expert 2	
		No	Valid
Expert 1	No	0	0
	Valid	0	1-22

Source: Validation Results

The results of the validation of the observation guidelines based on the analysis using the Gregory formula on the utilization of Chat GPT can be calculated with the results of the overall analysis of the items as follows:

$$Vc = \left[\frac{22}{0+0+0+22}\right]$$
$$Vc = \left[\frac{22}{22}\right]$$
$$Vc = 1$$

The result of the validation of all items is 1, so all items from the observation guide related to the utilization of Chat GPT by Islamic Education teachers are said to be valid.

2. Content Validity of Islamic Religious Teachers' Performance in Making Teaching Modules

The author, in this case, calculates the overall validity related to the performance of Islamic religious education teachers in making teaching modules using the Gregory formula as follows:

Table 2. Overall Validation Results of the research questionnaire

		Expert 2	
		No	Valid
Expert 1	No	0	0
	Valid	0	1-24

Source: Validation Results

The results of the validation of the research questionnaire, according to the analysis using the Gregory formula on the performance of Islamic religion teachers in making teaching modules, can be calculated by analysing all items as follows:

$$Vc = \left[\frac{24}{0+0+0+24}\right]$$
$$Vc = \left[\frac{24}{24}\right]$$
$$Vc = 1$$

The result of the validation of all items is 1, so all items from the research questionnaire related to the performance of Islamic religious education teachers in making teaching modules are said to be valid. The results of the reliability analysis on the pretest variable of the performance of Islamic religion teachers in making teaching modules using the SPSS version 29 application program can be seen as follows:

Table 3. Pretest Questionnaire Reliability Results

Cronbach's Alpha	N of Item
0,645	12

Source: SPSS Version 29

The reliability analysis results of the pretest of the performance of Islamic education teachers in making teaching modules are known to be 0.645. In contrast, the reliability analysis uses the formula from Cronbach's Alpha. If the result is more than 0.6, it is reliable, and if the result is less than 0.6, it is not reliable. It is known that the reliability result is 0.645, which means more than 0.6, so it can be said to be reliable. The results of the reliability analysis on the posttest variable of the performance of Islamic religion teachers in making teaching modules using the SPSS version 29 application program can be seen as follows:

Table 4. Posttest Questionnaire Reliability Results

Cronbach's Alpha	N of Item
0, 866	12

Source: SPSS Version 29

The reliability analysis of the posttest of the performance of Islamic religious education teachers in making teaching modules is known to be 0.866. The reliability analysis uses the formula from Cronbach's Alpha: if the result is more than 0.6, then it is reliable. If the result is less than 0.6, then it is not reliable. It is known that the reliability result is 0.866, which means more than 0.6, so it can be said to be reliable.

3. Descriptive Analysis of the Utilization of Chat GPT by Islamic Religious Education Teachers

Descriptive analysis of Chat GPT utilization using the SPSS version 29 application program obtained the following results:

Table 5. Descriptive Analysis Results Utilization of GPT Chat by Islamic Religious Education Teachers

	N	Minimum	Maxsimum	Mean
Statement 1	1	1,00	1,00	1,0000
Statement 2	1	1,00	1,00	1,0000
Statement 3	1	1,00	1,00	1,0000
Statement 4	1	1,00	1,00	1,0000
Statement 5	1	1,00	1,00	1,0000
Statement 6	1	1,00	1,00	1,0000
Statement 7	1	1,00	1,00	1,0000
Statement 8	1	1,00	1,00	1,0000
Statement 9	1	1,00	1,00	1,0000
Statement 10	1	1,00	1,00	1,0000
Statement 11	1	1,00	1,00	1,0000
Statement 12	1	1,00	1,00	1,0000
Statement 13	1	1,00	1,00	1,0000
Statement 14	1	1,00	1,00	1,0000
Statement 15	1	1,00	1,00	1,0000

Statement 16	1	1,00	1,00	1,0000
Statement 17	1	1,00	1,00	1,0000
Statement 18	1	1,00	1,00	1,0000
Statement 19	1	1,00	1,00	1,0000
Statement 20	1	1,00	1,00	1,0000
Statement 21	1	1,00	1,00	1,0000
Statement 22	1	1,00	1,00	1,0000
Valid N (listwise)	1			

Source: SPSS Version 29

Based on the results of the descriptive analysis of the steps of the utilization of Chat GPT that the author has carried out, it is known that the minimum value is 1, and the maximum value is 1. The mean value is 1.00 for all 22 statements measured through direct observation using observation guidelines. This shows that all the steps of utilizing Chat GPT reflect the consistency and successful implementation of each stage in the research, where all steps are carried out systematically according to predetermined guidelines. So, the utilization of Chat GPT goes according to plan and shows the effectiveness of the research approach. Based on the results of the percentage analysis, as follows:

$$p = \frac{1}{1} \times 100\ \% = 100\%$$

The percentage result of Chat GPT utilization is 100% based on the measurement criteria 100% is categorized as "Very Good", which means that Islamic religious education teachers in Mempawah Regency have been able to utilize Chat GPT very well.

4. Performance of Islamic Religion Teachers in Making Teaching Modules

A descriptive analysis of the performance of Islamic religion teachers in making teaching modules using the SPSS version 29 application program obtained the following results:

Table 6. Results of Descriptive Analysis of Islamic Religion Teacher Performance in Making Teaching Modules

	N	Minimum	Maxsimum	Mean	Std. Deviantion
Pretest	22	34,00	43,00	37,9545	2,57233
Posttest	22	40,00	48,00	45,4545	2,85736
Valid N (listwise)	22				

Source: SPSS Version 29

Based on the results of descriptive analysis of the pretest performance of Islamic religion teachers in making teaching modules, it is known that the minimum value is 34 and the maximum value is 43. The mean value is 37.9545. Based on the results of the percentage analysis, as follows:

$$p = \frac{37{,}9545}{43} \times 100\ \% = 88{,}27\%$$

The pretest percentage result of the performance of Islamic religion teachers in making teaching modules is 88.27% based on the measurement criteria, 88.27% is categorized as "Good", which means that the performance of Islamic religion teachers in making teaching modules before utilizing Chat GPT is good. Furthermore, the results of descriptive analysis of the post-test performance of Islamic religion teachers in making teaching modules show that the minimum value is 40 and the maximum value is 48. The mean value is 45.4545. Based on the results of the percentage analysis, as follows:

$$p = \frac{45{,}4545}{48} \times 100\ \% = 94{,}7\%$$

The percentage result of the posttest of the performance of Islamic religion teachers in making teaching modules is 94.7% based on the measurement criteria, 94.7% is categorized as "Very Good", which means that the performance of Islamic religion teachers in making teaching modules after utilizing Chat GPT is excellent. Normality analysis using the SPSS version 29.0 application program obtained the following results:

Table 7. Normality Results

	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	0,170	22	0,100	0,929	22	0,116
Posttest	0,251	22	<0,001	0,815	22	<0,001

Source: SPSS Version 29

Based on the results of the normality test, it is known that the significance values in the pretest questionnaire are 0.100 and 0.116, which means more than 0.05, so the residual value is usually distributed. While the normality test results on the post-test questionnaire are <0.001, which means less than 0.05, the residual values are not normally distributed. Wilcoxon analysis using the SPSS version 29.0 application program obtained the following results:

Table 8. Wilcoxon Test Results

Pretest-Posttest	
Z	-4,123
Asymo. Sig. (2-tailed)	<0,001

Source: SPSS Version 29

Based on the results of the Wilcoxon test, it is known that Asymp.Sig. (2-tailed) is <0.001 smaller than 0.05, it can be concluded that Ha is accepted. This means that there is a difference between the results of the Pretest and post-test, so it can be said "There is a significant effect of utilizing Chat GPT on the performance of Islamic religion teachers in making teaching modules in Mempawah Regency, West Kalimantan, Indonesia,"

5. Performance of Islamic Religious Teachers in Making Teaching Modules in Mempawah District Before Utilizing GPT Chat

Based on the analysis results, Islamic Religious Teachers performance in making teaching modules in Segedong District, Mempawah Regency, before utilizing Chat GPT, showed a percentage level of 88.27%. This percentage is classified in the "Good" category but has not reached the optimal level of satisfaction, which is 100%. Although the category shows positive results, there is still room for improvement, especially in the efficiency and quality of making teaching modules. This is an important concern, considering that teaching modules strategically support an effective learning process.

One indication of the analysis's results is the existence of several obstacles or constraints in the process of making teaching modules that affect teacher performance. These obstacles include a lack of time, limited resources, and a lack of relevant technological knowledge. Islamic religion teachers in Segedong sub-district tend to face these challenges in producing teaching modules that meet the curriculum's needs and students' characteristics. These obstacles can potentially hinder the learning process and affect student learning outcomes.

The results of the questionnaire analysis and statements containing the teacher's ability to integrate technology, timeliness, and the teacher's ability to integrate learning media and methods have the lowest scores. Thus, it is necessary to strengthen teachers' ability to adopt technology, increase timeliness in compiling materials, and enrich the use of media and learning methods to prepare teaching modules. This is relevant to several studies because teacher performance in preparing teaching modules still needs to be developed, which is expected to impact the quality of learning positively. The improvement must be supported by fundamental changes, one of which is the teacher's skill in implementing the module from the previous conventional module to an innovative module for Islamic religion teachers in Mempawah Regency (Brandt et al., 2019; Hamdi et al., 2024; Mukhlishina et al., 2023).

So, to achieve improved teacher performance in preparing teaching modules, a commitment from the willingness of teachers to change is required, especially in terms of approaches and strategies used in preparing teaching modules. This is relevant to the principle that desired changes will not occur automatically but must be driven by active efforts and awareness to make the necessary changes. This indicates the need for efforts to increase the competence and capacity of Islamic religion teachers in developing teaching modules by utilizing available technology. In addition, there needs to be adequate support and training in the use of tools such as Chat GPT so that they can be optimally utilized to improve the quality of education in Mempawah Regency. This effort not only includes individual teachers' desire to develop but also requires support from the school and government in providing relevant training for teachers.

Furthermore, the results of this study can be used as material to formulate strategies and professional development programs for Islamic religious teachers to improve technological literacy and the creation of Islamic Religious Education teaching

modules. This program should include understanding instructional design principles, using digital tools, and more effective time management. In addition, it creates a supportive environment for teachers to adopt changes in preparing for learning with technology. Support from education communities, such as teachers' working groups (KKGs), can be an effective platform for sharing experiences and best practices. With a collaborative environment, teachers can learn from each other and accelerate technology implementation in learning.

Chat GPT also provides an opportunity to overcome obstacles in choosing more innovative and efficient learning media and methods. Through technology, it provides relevant recommendations based on existing data, thus helping teachers develop more varied and innovative modules. With better-designed teaching modules, students are expected to receive learning that is more meaningful and relevant to their needs. The results of this analysis emphasize that the performance of Islamic religion teachers in making teaching modules before using Chat GPT still requires much improvement. Technology support, relevant training and a collaborative environment are key elements in improving the quality of Islamic religious education in the Mempawah district. With these steps, teachers are expected to optimize their potential and positively impact the learning process (Zafi et al., 2021; Zaini et al., 2023).

6. Utilization of Chat GPT by Islamic Religion Teachers in Making Islamic Religious Education Teaching Modules

The analysis results show that Islamic Religious Teachers in Mempawah Regencys utilization of Chat GPT in making Islamic Religious Education teaching modules obtained a percentage value of 100%, which means that it has reached an optimal level of satisfaction. This indicates that the assessment category is included in the "Very Good" criteria. This indicates that Islamic Religious Teachers in the Mempawah Regency have succeeded in utilizing Chat GPT effectively to compile teaching modules to the maximum.

This success shows that Islamic religion teachers in the Mempawah Regency have been able to integrate Chat GPT technology in making teaching modules. Islamic Religious Teachers have understood step by step how to utilize Chat GPT in the practice of making teaching modules effective. The utilization of Chat GPT by Islamic Religious Teachers in making Islamic Religious Education teaching modules shows the technological skills possessed by teachers in the Mempawah Regency. Using Chat GPT, Islamic teachers can easily produce teaching modules that meet the needs and curriculum. This makes the learning process more interesting and relevant for students and indicates the adaptation to technology in Islamic religious education.

The success of Islamic Religious Teachers in Mempawah Regency in utilizing Chat GPT to create Islamic Religious Education teaching modules also reflects the high level of creativity and innovation in education. By utilizing technology as a tool, Islamic Religious Teachers can develop learning methods that are more interactive and interesting for students. In addition, the use of Chat GPT in developing Islamic Religious Education teaching modules can also help overcome some of the obstacles often faced by Islamic

Religious Teachers, such as limited time and resources. Using Chat GPT, Islamic Religious Teachers can create teaching modules effectively and efficiently without having to spend a lot of time and energy making them manually. This allows Islamic Religious Teachers to focus more on learning activities that are more interactive and learner-oriented.

Although the use of Chat GPT in making Islamic Religious Education teaching modules has shown excellent results, it is also necessary to evaluate the use of technology. This is done so that the resulting Islamic Religious Education teaching modules remain relevant and accurate in accordance with the needs of students and the curriculum (Latipah et al., 2023; Wulandari et al., 2022). This success shows that modern technology, such as Chat GPT, can significantly impact the world of Islamic religious education. In addition, it is also necessary to pay attention to the security and privacy aspects of using such technology to avoid potential problems, such as data misuse or violation of technology ethics in education.

7. Performance of Islamic Religious Teachers in Making Islamic Religious Education Teaching Modules After Utilizing GPT Chat

The analysis results show that Islamic Religious Teachers in Mempawah Regencys utilization of Chat GPT in making Islamic Religious Education teaching modules obtained a percentage value of 100%, which means that it has reached an optimal level of satisfaction. This indicates that the assessment category is included in the "Very Good" criteria. This indicates that Islamic Religious Teachers in the Mempawah Regency have succeeded in utilizing Chat GPT effectively to compile teaching modules to the maximum.

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8. The Effect of Chat GPT Utilization on the Performance of Islamic Religion Teachers in Making Islamic Religious Education Teaching Modules

The results of hypothesis testing carried out using the Kolmogorov-Smirnov and Shapiro-Wilk normality tests found that the data was not normally distributed. This is because the amount of data is less than 30 (n < 30). According to Zulkarnain and Nopita Sari, the data is more than 30; it can be assumed that it is usually distributed. Meanwhile, if the amount of data is less than 30, it can be assumed that it is not normally distributed. (Zulkarnain & Sari, 2022). According to Widhiarso, normality testing does not have the power to detect an abnormal distribution with a small sample size. Therefore, although the sample size is small, statistical testing is still needed to ensure data distribution (Widhiarso, 2012). Due to data that is not normally distributed, the subsequent hypothesis testing is a non-parametric test, namely the Wilcoxon test. Based on the results of the Wilcoxon test, it is known that Asymp.Sig. (2-tailed) < 0.001 is smaller than 0.05, so it can be concluded that Ha is accepted, which means there is a difference between the pretest and post-test results. Thus, it can be concluded that the utilization of Chat GPT significantly influences the performance of Islamic Religious Teachers in making teaching modules in Mempawah Regency.

Based on the Wilcoxon test results, Chat GPT in education can improve the efficiency and quality of learning. Chat GPT can assist teachers in developing more interesting and relevant learning materials (Yu, 2023). Islamic Religious Teachers can utilize Chat GPT to create Islamic Religious Education teaching modules effectively and efficiently (Grassini, 2023; Kasneci et al., 2023). In addition, Chat GPT can provide suggestions regarding teaching strategies and learning approaches that are relevant to the characteristics of students, as well as learning indicators that are easy for students to understand.

These results indicate that the use of Chat GPT significantly affects the performance of Islamic Religious Teachers in Mempawah Regency in creating Islamic Religious Education teaching modules. The significant difference between the pretest and post-test results shows that Chat GPT technology can produce teaching modules that are more structured, relevant and by the curriculum. According to Haeranah, Ahmad Firman, and Andi Ririn Oktaviani, technology positively and significantly affects teacher performance. This is because technology is a forum to facilitate learning and improve performance by

creating, using, and managing technological processes as a source of information and seeking information. This will have a significant effect and can increase the performance of qualified teachers (Haeranah et al., 2023).

From the results of this study, the utilization of AI technology such as Chat GPT can help increase efficiency in the preparation of teaching modules; at least, that is the trend among Islamic religious teachers in Mempawah Regency. With Chat GPT, Islamic Religious Teachers can easily access relevant information and suggestions to develop quality teaching modules without doing much research and thinking manually. In addition, the results also show that the use of Chat GPT can improve the overall quality of learning. With the help of AI technology in developing teaching materials, the resulting Islamic Religious Education Modules are more structured, relevant and informative. This can increase learners' understanding and interest in learning and improve the overall effectiveness of learning. However, using Chat GPT has several challenges, including the potential for teacher over-dependence on technology. Teachers may lose creativity and initiative if they rely too much on Chat GPT to create teaching materials. Therefore, teachers need to maintain their role as facilitators in learning and ensure that technology is only used as a tool in the learning process.

This research provides valuable insights into the potential of AI technology in Islamic religious education, especially in creating teaching modules. However, the challenges and risks associated with utilizing such technology also need to be taken seriously, so teachers should be provided with adequate training to optimally use Chat GPT without losing their creativity and active involvement in learning. Thus, the results of this study confirm that Chat GPT significantly improves the performance of Islamic Religious Teachers in making teaching modules. This technology improves efficiency, and the quality of teaching materials produced. However, to maximize its benefits, it is important to maintain a balance between the use of technology and the active role of teachers in creating learning that suits the needs of learners.

Conclusion

The finding in this study is that Chat GPT utilization affects the performance of Islamic religion teachers in Mempawah Regency when making teaching modules. The results of this study confirm that AI technology such as Chat GPT can be an effective tool to improve the quality and efficiency of teaching module creation while positively impacting the overall learning process. Using technology allows teachers to work more efficiently and produce learning materials that are more relevant to the needs of students. The specific findings of this study are. First, the performance of Islamic Religious Teachers in Mempawah Regency in making Islamic Religious Education teaching modules before utilizing Chat GPT was in the "Good" category with a percentage value of 88.27%. Second, using Chat GPT by Islamic Religious Teachers in Mempawah Regency to increase teaching modules to the "Very Good" category with a percentage value of 100%. Third, based on the post-test results, the performance of Islamic Religion Teachers in making teaching modules in Mempawah Regency before utilizing Chat GPT is in the "Very Good" category with a

percentage value of 94.7%. Fourth, the results of hypothesis testing prove that the use of Chat GPT significantly affects the performance of Islamic religion teachers in making teaching modules.

However, this research is not final, and there are still many limitations related to data sources and units of analysis. This research only focuses on using Chat GPT to assess the performance of Islamic religion teachers in elementary schools. Thus, further research is needed to accommodate other new findings in the utilization of technology at other educational levels. In addition, although quantitative analysis has been used, future research can use other methods and approaches to provide new, more comprehensive findings on the utilization of technology in Islamic religious education. This study recommends conducting further research at various levels of education using various methods and approaches to find better technology utilization in the Islamic religious education system.

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