

## The Role of ChatGPT for Primary School Teachers

Nông Thị Trang<sup>1</sup>, Dương Thị Lê<sup>2</sup>

<sup>1,2</sup>Thai Nguyen University of Education, Faculty of Primary Education, Vietnam



**ABSTRACT:** ChatGPT, launched at the end of 2022, has quickly established its important role in supporting primary school teachers in enhancing the quality of teaching. This tool not only helps teachers design lessons quickly and effectively but also creates rich and diverse learning materials, thereby stimulating student engagement through interactive activities. Furthermore, ChatGPT assists in assessing and evaluating students, enabling primary school teachers to create tests and analyze learning outcomes accurately. However, to fully leverage the potential of ChatGPT, teachers need to have a solid understanding of this tool, clearly define their usage goals, and verify information to ensure accuracy. The application of ChatGPT not only innovates teaching methods but also meets the diverse learning needs of students, contributing to the establishment of a modern and effective learning environment.

**KEYWORD:** ChatGPT, primary school teacher, tool, role, education

### I. INTRODUCTION

ChatGPT emerged at the end of 2022 and quickly gained widespread popularity worldwide in early 2023. To date, ChatGPT has been applied in various fields, such as law, healthcare, economics, software development, media, and education. Particularly in the field of education, with the continuous advancement of artificial intelligence (AI) technology, ChatGPT promises to continue providing new experiences in learning and teaching.

Many studies and articles have affirmed the role and potential of ChatGPT in education. Rudolph, Jürgen, Tan, Samson, and Tan, Shannon assert that artificial intelligence and ChatGPT can improve education by providing powerful features that support educational management, teaching, learning, and research [1]. The applications of artificial intelligence and ChatGPT in education are diverse, ranging from enhancing management, assessing learning outcomes, improving teaching quality, to developing online courses that create more interactive and dynamic learning experiences [2]. Ashley (2023) evaluated and analyzed the benefits and potential challenges of applying large language models in education from the perspectives of students and teachers. The study summarizes the current state of large language models and describes their applications in education, providing insights into how to use these models to create educational content, enhance student engagement and interaction, and personalize the learning experience. However, the research also emphasizes the existing challenges when applying large language models in education, including the need for teachers and students to develop skills and knowledge to understand this technology, as well as its limitations. It also highlights the necessity of a clear strategy within the educational system and a teaching approach focused on critical thinking and fact-checking to effectively use and leverage large language models in the learning and teaching process [3]. Ausat states that today's learners need access to various types of information and have different ways of doing so, which means they are not reliant on a single source, namely the teacher. This diversity in accessing information has led to the need to evaluate the quality of the information they receive, which requires teachers to constantly seek, update, and expand their knowledge while integrating the benefits that technology offers to meet and keep pace with the trends and needs of learners; transforming from the role of knowledge transmitter to that of a guide, directing and organizing learners to receive, assess, and determine knowledge that is relevant to themselves [4]. According to Clarizia et al. (2018), in the field of education, chatbots—a form of AI based on natural language models—have become a potential tool to improve the learning process and support teaching. ChatGPT has demonstrated significant potential to transform the way we learn and interact with information. It can be seen that AI-controlled tools are becoming increasingly sophisticated and easily accessible [5]

Clearly, in the context of education witnessing rapid changes due to technology, ChatGPT has become a valuable tool that helps teachers in general and primary school teachers in particular enhance the quality of teaching and reduce their workload. However, to use ChatGPT effectively, teachers need to clearly understand the roles of this tool and how to optimize its application in education. Our article will highlight the role of ChatGPT for primary school teachers and provide some considerations for using ChatGPT to achieve high effectiveness in teaching.

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### II. RESEARCH RESULTS

#### 2.1. Some issues regarding ChatGPT

##### 2.1.1. Definition of ChatGPT

ChatGPT is an artificial intelligence (AI) model developed by OpenAI, based on the GPT (Generative Pre-trained Transformer) architecture. Trained on a vast amount of text data, ChatGPT has the ability to understand and generate natural language, allowing it to engage in conversations with humans in a natural manner.

ChatGPT not only answers questions but also supports many tasks such as text editing, language translation, providing information and content creation. This model relies on deep learning technology to predict and generate appropriate responses based on the context of the conversation, creating a flexible and effective interactive experience for users.

##### 2.1.2. Principle of operation

In the tech world, ChatGPT is essentially an artificial intelligence tool because all the information and data it possesses comes from two conditions: what humans have pre-set and what it develops through the process of gathering information. Regarding the first condition, Chat GPT is quite similar to current tools. However, in the second condition, Chat GPT represents a significant advancement. Its intelligence is "self-developing" based on everything it learns from interacting with users. By the end of 2022 and early 2023, scientists succeeded in teaching AI languages and measuring intelligence using a unit called Hyper Parameters. By collecting data from all sources around the world (Wikis, magazines, public reports, encyclopedias...), AI has read and analyzed the layers of meaning in each text. Simply put, it began to function like possessing a human brain (in some aspects)..

##### 2.1.3. Benefits of ChatGPT

Chat GPT is a powerful tool that helps you solve a variety of tasks. Here are the main benefits of Chat GPT:

**Quick Information Search:** Chatting directly with Chat GPT can help you quickly find information, instead of having to click on a link on Google or Bing. However, the quality of the search depends on how you phrase your questions. **Writing Advertisements:** Chat GPT can help create high-quality advertising content if you provide clear data and guidelines. **Writing Code and Debugging:** What seems impossible is actually achievable in practice. Chat GPT has the ability to write code and assist you in finding and fixing bugs efficiently. **Language Translation:** A great alternative to Google Translate, with flexible and accurate expression. The translations provided by Chat GPT will surely satisfy you. **Educational Support:** Chat GPT can create sets of quick questions to help teachers assess students' performance or use them in lessons.

#### 2.2. The role of ChatGPT for Elementary school teachers

##### 2.2.1. Who is an elementary school teacher?

An elementary school teacher (EST) is someone who is dedicated to teaching and guiding students at the elementary level, specifically from grades 1 to 5. They have an incredibly important role in helping children absorb knowledge, develop necessary skills, and build a solid foundation for future learning.

Elementary school teachers play a particularly significant role in the education system of a country. They are distinct from teachers at other educational levels in that they are trained to teach multiple subjects and are often referred to as "generalist teachers." In most elementary classrooms, there is typically one teacher who performs the "generalist" role, which is equivalent to a team of teachers at higher educational levels. This allows elementary school teachers to be more involved with their students, dedicating more time to teaching, fostering relationships, and having a larger influence on students' character development.

James Arthur (2006) stated that "elementary school teaching is an incredibly complex profession." This profession requires teachers to possess: (1) Knowledge of the subject matter and related issues, as well as understanding the students; (2) Knowledge and skills in using teaching strategies to present, explain, and illustrate ideas to students; (3) The ability to engage students in teaching activities, meet their needs, and foster their development; (4) The ability to understand students' attitudes toward what they are learning and how teachers can encourage or limit these attitudes; (5) The ability and willingness to learn from various sources, including pedagogical knowledge and updates in specialized, scientific knowledge.

Given such a special role and position, elementary school teachers are expected to lead by example in continuous self-learning and professional development to improve their ethical standards, character, professional skills, and to serve as role models for students. In addition to essential competencies such as teaching abilities, educational skills, research abilities, building a positive learning environment, fostering relationships between school, family, and society, and career guidance for students, the context of the knowledge economy, the 4.0 industrial revolution, and the development of science and technology requires elementary school teachers to have the ability to utilize and apply information technology in teaching to enhance the effectiveness of the learning process

##### 2.2.2. The role of ChatGPT application for Elementary school teachers

In the context of elementary education, which is increasingly diversifying teaching and learning methods, ChatGPT is seen as an effective tool to support teachers in various aspects: lesson planning, creating learning materials, assessing students, classroom management, inspiring creativity, innovating teaching, and professional development.

##### 2.2.2.1. Assisting Elementary school Teachers in quickly and effectively designing lesson plans

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Teachers can ask ChatGPT to generate lesson plans for each topic, ranging from basic to advanced levels, tailored to students' abilities. Building lesson plans according to the curriculum: ChatGPT can help teachers create weekly or monthly teaching schedules based on the official curriculum or adjust content to match students' learning pace and preferences. ChatGPT can also assist elementary school teachers in creating interactive activities through games, quizzes, and scenarios to help students absorb the lesson effectively.

### 2.2.2.2. Suggesting visual teaching methods

ChatGPT can support elementary school teachers by suggesting visual teaching methods that help students grasp knowledge in a more dynamic and effective way. For example, visual teaching methods include:

**Illustrative Images:** Teachers can ask ChatGPT to suggest images or visual models for teaching. For example, when teaching about the Solar System, ChatGPT can recommend using charts, drawings, or 3D models to illustrate the positions and movements of the planets.



**Figure 1. The image created by ChatGPT is an illustrative 3D model of the Solar System, with the Sun at the center and planets orbiting around it. Each planet is labeled, helping students easily recognize and understand their positions as well as their movements.**

**Role-Playing Game:** ChatGPT can suggest role-playing scenarios to help students transform into characters in the lesson. For example, with the command, "Create a scenario to help elementary students learn storytelling." In just one second, ChatGPT will generate a vivid and engaging story. Here is the role-playing game scenario: "The Legend of the Starfruit Tree." Step 1: Group Division – Students will be assigned roles (Older Brother, Younger Brother, Magical Bird, Narrator...). Step 2: Role Execution – Each group will reenact the story according to the provided script. Step 3: Content Variation – The student groups can change the plot or create a different ending. Step 4: Discussion – The teacher will ask questions for students to draw lessons from the story. Step 5: Rewrite the Story – Students will rewrite the story in their own way, with a message they learned.

**Educational Videos and Animations:** Teachers can ask ChatGPT to suggest videos or guide them on how to create simple animated videos to illustrate lessons. For example, when teaching about the life cycle of a butterfly, ChatGPT can guide on how to create a stop-motion video to help students observe the transformation from caterpillar to chrysalis, and then to butterfly in 6 steps: Step 1: Prepare materials – Colored paper, clay, or butterfly models at different stages. Step 2: Set up the scene – Use a simple background and arrange good lighting to avoid shadows. Step 3: Take photos of each stage – Capture each small step of the transformation from caterpillar to chrysalis and then to butterfly. Step 4: Use editing software – Import the images into applications like Stop Motion Studio or iMovie to compile them into a video. Step 5: Add sound and captions – Narrate each step to make it easier for students to understand. Step 6: Present and discuss – The teacher shows the video to students and asks questions about the butterfly's transformation process. Additionally, when the teacher requests illustrated images, ChatGPT will provide the illustrative images of the 6-step process. Figure 2



Figure 2

Application of Virtual Reality (VR) and Augmented Reality (AR) Technology: ChatGPT can suggest ways to use VR/AR for students to have interactive learning experiences. For example, in a geography lesson, students can use AR applications to explore a model of a volcano or a river flow right in the classroom. For instance, when an elementary school teacher asks for guidance on how to use AR to explore a volcano model and river flow, ChatGPT will immediately provide clear and coherent instructions as follows: Step 1: Choose a suitable AR application – Use applications such as Google Expeditions, Merge Cube, or JigSpace to display the 3D model. Step 2: Access AR content – Students use tablets or phones to scan the model and view interactive images of erupting volcanoes or river flows. Step 3: Observe details – Students can rotate, zoom in on the model to better understand the structure of the volcano or the flow of a river over time. Step 4: Perform practical exercises – Teachers can ask students to predict the outcome of an eruption or draw a river flow map based on the information obtained from AR. Step 5: Discuss and conclude – Students present their observations and draw lessons about natural geological processes.

Science Experiments: ChatGPT can provide a list of simple science experiments that students can perform in class. For example, to teach about buoyancy, ChatGPT can guide teachers to conduct an experiment with a glass of water and objects of different masses to help students understand why some objects sink and some float.

### 2.2.2.3. Support elementary school teachers in assessing students.

ChatGPT can play a significant role in supporting elementary school teachers in assessing and evaluating students through the following ways:

Creating Diverse Tests and Assignments: ChatGPT has the ability to generate multiple-choice and essay questions that align with the teaching content, helping teachers save time in preparing tests. By providing a variety of exercises, ChatGPT helps students approach knowledge from different angles, enhancing their understanding and thinking skills. For instance, ChatGPT can suggest word-matching games, fill-in-the-blank stories, or organize small competitions to make learning more engaging for children. An example of a word-matching game: teachers can use ChatGPT to create a list of words and ask students to match the letters to form the correct words. How to organize: Teachers divide the class into small groups (3-5 students per group). Each group is given a set of scrambled letters. Within 1-2 minutes, the group that forms the most meaningful words wins. Teachers can increase the difficulty by adding rules such as only using words from a specific topic (fruits, animals, objects...). A specific example: If the topic is animals, ChatGPT can provide the letters "N/A/G/N", and students must form the word "NGAN" (if they are learning Vietnamese).

Analyzing and Evaluating Learning Outcomes: ChatGPT can assist teachers in analyzing test results, identifying the strengths and weaknesses of each student, thereby adjusting teaching methods accordingly. Providing Detailed Feedback: Based on the students' work, ChatGPT can suggest areas for improvement, helping teachers offer specific and useful feedback.

Personalizing the Assessment Process: ChatGPT can design exercises based on the level and needs of each student, making the assessment process more accurate and effective. By storing and analyzing learning data, ChatGPT helps teachers track each student's progress over time, allowing for adjustments to the teaching plan as needed.

Supporting in Detecting and Preventing Cheating: ChatGPT can help teachers identify works that show signs of copying or improper use of AI, ensuring honesty in assessments. Elementary school teachers can also use ChatGPT as a tool to discuss with students the importance of honest learning and the consequences of cheating in education.

### 2.2.2.4. Support elementary school teachers in effective classroom management

ChatGPT can support teachers in classroom management, ensuring an effective learning environment. Specifically:

Drafting classroom rules: Propose regulations suitable for elementary students, helping to maintain discipline.

Supporting behavior monitoring: Teachers can record and analyze students' behavior data to take timely corrective measures.



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Scheduling and time management: ChatGPT assists teachers in creating schedules, reminding important events, and managing teaching time

Drafting emails and notifications: Assist teachers in composing emails, parent meeting invitations, and notifications quickly and professionally.

Creating evaluation and feedback forms: Help teachers easily collect feedback from parents and students about the learning process.

### 2.2.2.5. Support in professional development for Teachers

Chat GPT helps elementary school teachers open the door to exploring new teaching methods while preserving traditional values. Chat GPT is not a "magic wand" to replace experience but is a highly "cool" support tool for you to create and experiment with unique ideas. Here are a few ways ChatGPT can "transform" the process of discovering and applying new teaching methods:

Update global education trends: You can ask ChatGPT about current educational trends – from interactive learning methods and gamification to practical learning projects. It helps you quickly grasp information without having to spend time searching online.

Propose creative lesson ideas: Need an idea for a lesson on "traditional culture" or "fun science"? ChatGPT will suggest interactive activities, games, and group projects that are both new and engaging, helping students become more enthusiastic during class.

Assist in lesson planning: Instead of having to write lessons from scratch, you can "ask" ChatGPT to suggest outlines, activities, discussion questions... From there, you can customize it in your own way, both creatively and traditionally.

Critique and question ideas: One of ChatGPT's "advantages" is its ability to converse – it not only offers ideas but can also "challenge" them, ask for more details, and suggest improvements. This helps you self-verify and enhance the quality of your lessons.

Learn about new teaching methods: ChatGPT can provide information on advanced educational models such as Montessori, STEAM, or personalized education.

### 2.2.2.6. Inspire creativity and innovation in teaching

ChatGPT can suggest ways for elementary school teachers to integrate technology into their teaching. Specifically, ChatGPT can advise on how to use applications, software, or online learning platforms to enhance teaching effectiveness, such as applications: Google Classroom, Kahoot!, Edmodo, Quizlet, Nearpod, Seesaw... Using a combination of multiple platforms helps elementary teachers create a rich learning experience for students. It also creates opportunities for students to engage and interact with the learning content, thereby capturing their progress and needs. ChatGPT supports elementary teachers in creating digital content: ChatGPT can help write scripts for educational videos, and create social media posts about education. ChatGPT also helps elementary teachers propose interesting extracurricular activities: suggesting outdoor learning sessions, simple science experiments, or skill clubs suitable for elementary students.

## 2.2.3. Some notes for Elementary school teachers when using ChatGPT

### 2.2.3.1. Learn and master knowledge about ChatGPT.

To effectively use ChatGPT, teachers need to learn and master the basic concepts related to this technology. This will help teachers understand how ChatGPT works, thereby leveraging its features in the teaching process.

Understanding How ChatGPT Works: ChatGPT is an AI-based tool trained on a large amount of data to be able to answer questions and automatically generate text. Teachers need to grasp the mechanism of ChatGPT to optimize its usage.

Understanding the Applications of ChatGPT in Education: ChatGPT can be used to produce teaching materials, answer students' questions, summarize information, and make predictions. Knowing the applications of ChatGPT will help teachers apply this tool effectively in teaching.

Understanding the Benefits and Limitations of ChatGPT: ChatGPT can help teachers save time and improve teaching efficiency. However, this tool may also encounter issues related to accuracy and reliability. Therefore, teachers need to be aware of the benefits and limitations of ChatGPT to use it reasonably.

### 2.2.3.2. Determine the objectives of using ChatGPT

Teachers need to clearly define the objectives of using ChatGPT, such as enhancing writing skills, improving students' reading comprehension, or assisting students in finding information more effectively. Defining these objectives will help teachers focus on using ChatGPT's features appropriately to achieve optimal results. With the characteristics of each subject, grade level, and student proficiency, the extent of ChatGPT's application will vary. For elementary students, the objectives of using ChatGPT may be to support the explanation of difficult concepts, provide illustrative examples, and answer students' questions...

### 2.2.3.3. Verify information

ChatGPT does not always provide absolutely accurate information. Therefore, elementary school teachers using this tool should always verify and evaluate the information provided by ChatGPT, especially in sensitive or important areas.

### 2.2.3.4. Select content

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When using ChatGPT, elementary school teachers need to choose content that is appropriate for the age and developmental level of their students, avoiding unsuitable topics. Combining ChatGPT with other educational materials to provide a multidimensional perspective, resulting in higher teaching effectiveness.

### III. CONCLUSIONS

In the context of education reform being an urgent goal of the education sector, ChatGPT is becoming an effective solution to improve teaching methods and enhance the quality of education, benefiting both students and teachers. The application of ChatGPT in teaching still faces some challenges, such as the reliability of answers and the need for teachers and education administrators to approach and use new technology. Training and preparing knowledge for teachers as well as students when using ChatGPT is very important. With the strong impact of the artificial intelligence revolution, the education sector needs to have the right perspective and policy to ensure not missing out on a powerful driving force for educational reform and innovation. It is essential to clearly identify that in this process, teachers are the most important factor, and the effectiveness of ChatGPT in education depends on the awareness and ability of each teacher to effectively utilize ChatGPT.

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