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# Personalizing Learning in The Chatgpt ERA

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## Abstract:

The digital transformation and rapid advancements in science and technology have laid the groundwork for the rise of Education 4.0, characterized by the automation of learning through innovative digital tools such as artificial intelligence (AI). This article provides an outline of the fundamental concept of "personalized learning experiences," analyzes its inevitable development in the current educational context, and sketches a future-oriented approach to personalized learning in the AI era. It also highlights the benefits and limitations of integrating ChatGPT into learning activities.

**Keywords:** ChatGPT, learning experiences, personalization.

## 1. Introduction:

Amid the robust development of the Fourth Industrial Revolution (Industry 4.0) in Vietnam, Education 4.0 has become a familiar topic in educational forums and the academic community (Nguyen Thi My Loc & Hoang Sy Tuong, 2020). The Education 4.0 model can be understood from two perspectives: first, as an innovation and transformation in educational goals and pedagogical methods; second, as the integration of technological achievements from Industry 4.0 into education.

Specifically, Education 4.0 focuses on leveraging the potential of digital technologies, personalized data, and opportunities to promote lifelong learning. In other words, it represents an educational revolution that enables learners to take control of their own learning processes by personalizing their learning journeys with flexibility, dynamism, and adaptability. This marks the beginning of personalized learning practices.

To achieve this goal, Education 4.0 must incorporate scientific advancements brought by Industry 4.0, particularly automation and support from artificial intelligence.

This article explores the application of personalized learning experiences in the era of AI, proposing solutions to enhance personalized learning to adapt to the evolving context of the AI age.

## 2. Results and discussion:

### 2.1. Overview of ChatGPT:

ChatGPT (Chat Generative Pre-training Transformer) is a type of AI chatbot introduced in November 2022 by OpenAI, a U.S.-based company. An AI chatbot is a computer program that leverages artificial intelligence and natural language processing to understand user queries and generate automated responses, simulating human-to-human conversation. ChatGPT facilitates easy

and rapid information retrieval by automatically responding to user requests in various forms,

offering a seamless and efficient way to access information.



Illustration using Chatgpt Source: <https://www.qdnd.vn/giao-duc-khoa-hoc/cac-van-de/chat-gpt-la-cong-cu-gi-su-dung-nhu-the-nao-718012>

ChatGPT, currently officially supported in Vietnam, allows users to register an account using their personal phone numbers without purchasing external numbers or relying on additional information. Below are the steps to create a ChatGPT account using your personal details:

**Step 1:** Access the registration link provided below: [ChatGPT Registration Link](#). Choose to register using an email address you have created, which could be Gmail, Hotmail, or any other email service.

**Step 2:** After filling in your personal details, you will be prompted to enter your phone number. Enter your active phone number and select "Send code via SMS" to receive a verification code on your phone.

**Step 3:** A verification code will be sent to your phone number shortly.

**Step 4:** Enter the received verification code into the system. If the code is correct, the system will automatically proceed to the next step.

By following these steps, you can easily create a ChatGPT account in Vietnam. Compared to earlier methods, the registration process has been significantly simplified.

Currently recognized as the world's most advanced AI chatbot, ChatGPT can engage in conversations, providing fluent and comprehensive answers to user queries across various domains. Since its launch, many users have shifted from traditional web searches (e.g., Google, Baidu) to interacting directly with ChatGPT, leveraging its vast knowledge base to address their questions in mere seconds.

## 2.2. The Concept of Personalized Learning:

According to Nguyen Thi My Loc and Hoang Sy Tuong (2020), understanding Education 4.0 requires reviewing the historical evolution of educational models:

- **Education 1.0:** Characterized by church-controlled education with limited participation for privileged learners in religious institutions.
- **Education 2.0:** Emerged in response to the demand for democratization and massification of education, fostering public education systems and promoting capitalism's development.
- **Education 3.0:** Integrated information and communication technology (ICT) into education, popularizing open and online learning models (e.g., MOOC, COOC, SPOC).

This model revolutionized teaching and learning, making education accessible regardless of geography or time, and shifted the focus from instructors to learners as the primary agents in knowledge acquisition.

Building on the foundations of Education 3.0, Professor Siti Hajar Halili (2019) describes **Education 4.0** as the culmination of digital integration into daily life, where humans and machines collaborate to solve contemporary challenges and explore new scientific theories. Halili outlines four principles for implementing Education 4.0:

1. Redesigning learning spaces using tools like smart boards to facilitate group interactions.
2. Optimizing pedagogical methods, including self-directed learning (heutagogy), traditional pedagogy, and digital learning approaches (cybergogy).
3. Universities adopting flexible, customizable, and progressive curricula that incorporate the latest innovations without traditional constraints.
4. Integrating advanced technologies, particularly AI, into teaching and learning processes.

**Personalized learning** is thus a crucial element of the Education 4.0 framework. Despite being a relatively new concept in Vietnam, it has garnered attention internationally, as reflected in research by Shemshack & Spector (2020) and Dabae Lee et al. (2018). These studies describe personalized learning as a method that enhances learners' motivation and engagement, ultimately improving learning outcomes. Personalized learning tailors the educational process to meet individual needs and experiences, enabling learners to maximize their potential through customized instructions. This customization involves adapting teaching content, delivery methods, and pacing to align with each learner's abilities and depth of interest.

In Vietnam, Le Thai Hung and Nguyen Thai Ha (2021) define personalized learning as a teaching approach where the pace and method of instruction are optimized for each learner's needs. During the

“Edtech Vietnam & Trends in Personalized Learning” seminar hosted by VnEconomy on August 31, 2023, experts highlighted the rapid development of Edtech and AI in education. They noted that self-directed and personalized learning are essential to adapt to these advancements. However, they also acknowledged barriers such as low self-learning habits and limited awareness of technological achievements.

Dabae Lee further emphasizes the challenges of implementing personalized learning due to its complexity. It involves multiple layers with varying definitions, leading to diverse implementation models and research difficulties. Additionally, deploying personalized learning requires significant investments in modern educational technologies, making it challenging without sufficient technological support. Despite these obstacles, personalized learning remains a vital approach for modern education, necessitating practical experimentation and refinement across disciplines and subjects.

In summary, although there is no universal consensus on the definition of personalized learning, the following principles can be outlined:

- Learners can choose content based on their needs, interests, and abilities within pre-designed curricula.
- Learning content can be customized while ensuring core knowledge is maintained.
- Flexible learning methods accommodate learners' spatial and temporal conditions.
- A lifelong learning mindset ties teaching and learning to real-world problem-solving, transcending traditional classroom constraints.

### **2.3. The Future of Personalized Learning with ChatGPT:**

The future of automating teaching is no longer distant, thanks to advancements in technology and science. With ChatGPT as a foundational tool, several AI-based platforms now enable personalization and mimic human-like thought processes. Examples include:

- **Character.ai:** This neural network-based chatbot service generates human-like text responses and engages in contextual conversations. A public beta was released in September 2022, with a full version available since 2023. Users can create "characters" and customize their personalities through specific parameters, publishing them for community interaction. Characters can be modeled after fictional entities, real-life celebrities, or even the users themselves. The platform aims to create a "digital twin" that supports learning, writing, or engaging in linguistic games. Website: <https://character.ai>.
- **Personal.ai:** This service offers a digital version of the human mind, designed to continually learn from the user's personal knowledge and experiences while reflecting their unique personality and style. Unlike general AI models like OpenAI's ChatGPT or Microsoft's Copilot, which are owned by large corporations and built on publicly available data, Personal.ai empowers users to train, own, and use a unique AI version of themselves. It learns from individual data blocks, referred to as "memory blocks," which are structured within a "memory stack" for AI utilization. The broader this stack, the more accurate the AI becomes as a replica of its user. Applications range from being a standard chatbot to recalling forgotten memories, serving as an assistant or confidant, and even acting as a tool for remembrance by family members posthumously. Website: <https://Personal.ai>.
- **Socrat.ai:** This platform offers personalized and group learning spaces, allowing instructors to guide topics and learners to discuss, ask questions, and receive AI-generated research suggestions based on pre-trained intelligence.

These technological advancements establish a foundation for the "artificialization" of teaching, creating viable conditions for personalized learning experiences. As technology progresses, the possibility of lifelong learning with a "virtual teacher" modeled after individuals with strong

political, philosophical, or worldview orientations becomes entirely feasible.

#### **2.4. Benefits of Using ChatGPT for Personalized Learning:**

The integration of ChatGPT into personalized learning offers numerous significant benefits, especially when combined with modern technologies and diverse learner needs. Key advantages include:

##### *First, Improved Learning Outcomes,*

ChatGPT enables access to information across multiple domains, providing learners with tailored study materials on demand. Benefits include:

- **Diverse Information Access:** Streamlined access to various sources eliminates the need for manual searches across platforms.
- **Efficient Research:** Rapid synthesis of information optimizes research time while keeping learners updated on the latest developments in science, law, technology, and culture.
- **Enhanced Writing Skills:** ChatGPT offers suggestions for essay writing, reports, and text analysis, enabling learners to refine their expression and idea formulation.
- **Critical Thinking Development:** By prompting learners to question and validate ChatGPT's responses, the tool fosters analytical and critical thinking skills.

##### *Second, Global Access to Diverse Information,*

Using ChatGPT for personalized learning facilitates:

- **Scalable and High-Quality Training:** Easily accessible and consistent educational programs for global learners.
- **Interdisciplinary Insights:** Data from science, art, medicine, history, and law empowers users to integrate knowledge and solve complex problems.
- **Cross-Cultural Understanding:** Exploration of concepts and educational systems across cultures enhances global awareness.

- **Multilingual Support:** ChatGPT explains content in multiple languages, reducing reliance on advanced foreign language skills.

*Third, Cost and Resource Efficiency,*

ChatGPT automates training processes, including assessments and feedback, thereby:

- Reducing the time, effort, and costs associated with human intervention.
- Allowing flexible learning schedules and minimizing dependence on fixed timelines.
- Streamlining material preparation, enabling more focus on learning itself.

*And finally, Tailored Career Development,*

AI-driven personalized learning equips organizations to cultivate future leaders by providing skills and knowledge tailored to current roles and long-term career development, mitigating workforce attrition.

**Limitations of ChatGPT in Personalized Learning:**

Despite its advantages, ChatGPT presents notable limitations:

*First, Lack of Creative Thinking,*

Critical and creative thinking are integral to learning, but ChatGPT operates solely on pre-existing data, lacking the ability to generate original ideas or innovative solutions. This limitation can hinder the development of learners' creative problem-solving abilities.

*Second, Absence of Human Interaction,*

As an AI system, ChatGPT cannot replicate the emotional understanding, encouragement, or direct engagement that human teachers provide. Over-reliance on ChatGPT may negatively impact social skills and the overall learning experience.

*Third, Accuracy and Reliability Concerns,*

ChatGPT's reliance on pre-existing internet data poses challenges:

- **Information Validity:** ChatGPT cannot discern the accuracy or reliability of sources,

potentially leading to incomplete or incorrect answers.

- **Analytical Constraints:** Users must critically evaluate responses to mitigate misinformation risks, a task that requires vigilance and additional effort.

While ChatGPT is a powerful tool, addressing these limitations is crucial to fully leveraging its potential for personalized learning.

**3. Conclusion and recommendations:**

Based on the content presented, it is evident that the trend of personalized learning experiences, particularly in the digital era, is an essential and inevitable demand. Despite certain limitations in the awareness and application of artificial intelligence (AI) technologies in Vietnam, there is significant potential and opportunity for research in AI within education. The author emphasizes that while tools powered by AI technologies like ChatGPT cannot completely replace the role of educators, they redefine the teacher's role in delivering knowledge and shaping critical thinking. Teachers continue to play a vital role in creating interactive learning environments, providing personalized feedback, and fostering students' creative thinking.

Looking ahead, further research and development of AI-based tools, particularly those leveraging core technologies like ChatGPT, are needed for application in specific educational domains. Additionally, ethical considerations in scientific research and data security must be prioritized when utilizing these tools in education. Optimizing the synergy between AI technologies and teaching practices promises to unlock significant potential and benefits for education, especially in enhancing personalized learning experiences. To fully harness this potential, the collaboration and consensus of all stakeholders—administrators, educators, and learners—are indispensable.

In summary, with informed and intelligent utilization, AI-powered tools like ChatGPT can play a crucial role in enhancing the quality of education and learning through personalized

learning models. This contributes to building a modern, interactive, and progressive educational environment, equipping future generations with advanced knowledge applicable to real life.

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