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# AI Support on Learning Material Development: Toward Smart Learning Materials

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## Abstract

In recent years, the advent of WEB3.0 has introduced a range of novel products that have captured significant interest, such as chatbots like ChatGPT and graphical processing tools like DALL-E. This technological wave has seen rapid integration by students and teachers alike, who actively employ these tools to enhance various educational processes. However, alongside their benefits, concerns have arisen, including the dissemination of false or unintended information and the necessity for highly specific queries. Over time, these technologies are expected to evolve into more specialized and efficient AI-driven products. This paper aims to explore a specific application of AI in education: its role in the development of learning materials. It highlights three primary benefits of AI in this context. Firstly, AI enables the creation of well-designed instructional materials suitable for constructivist or experiential learning paradigms, reducing costs and time constraints. Secondly, it enhances learning interactivity by providing additional tools and expert support throughout the learning process. Thirdly, AI facilitates partial individualized learning within any educational material, thereby supporting what can be termed as smart learning materials. By leveraging AI tools in these ways, the development of learning materials stands to improve significantly, consequently enhancing the overall quality of education. This study will delve into specific inquiries from existing literature and evaluate currently available tools in relation to these advancements.

**Keywords:** Material development, artificial intelligence, online learning, interactive learning, smart materials