

The potential of Large Language Models in language education

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Abstract. This editorial explores the potential of Large Language Models (LLMs) in language education. It discusses the role of LLMs in machine translation, the concept of ‘prompt programming’, and the inductive bias of LLMs for abstract textual reasoning. The editorial also highlights using LLMs as creative writing tools and their effectiveness in paraphrasing tasks. It concludes by emphasizing the need for responsible and ethical use of these tools in language education.

Keywords: Large Language Models, language education, machine translation, prompt programming, abstract textual reasoning, creative writing, paraphrasing.

The advent of Large Language Models (LLMs) has opened up new avenues in various fields, including language education. These models, as discussed by Brants et al. [2], have shown significant potential in machine translation, a critical aspect of language learning. They have been able to translate languages with remarkable accuracy, thereby aiding in the comprehension and learning of new languages.

LLMs, such as the Transformer model, have been examined for their role in the political economy of AI by Luitse and Denkena [3]. Their ability to understand and generate human-like text makes them a valuable tool in language education. They can assist learners in understanding complex linguistic structures and provide context-based language learning, thereby enhancing the overall learning experience.

The concept of ‘prompt programming’, introduced by Reynolds and McDonell [4], further enhances the utility of LLMs in language education. It allows for more interactive and engaging learning experiences. Students can provide prompts to the model, which generates responses based on its training data. This interactive approach can make language learning more engaging and fun, increasing student motivation and participation.

LLMs also exhibit an inductive bias that enables them to reason abstractly about the text, as discussed by Rytting and Wingate [5].

This ability can be leveraged to teach students higher-level language skills such as inference, interpretation, and critical analysis. It can help students understand the underlying meanings and nuances in texts, thereby enhancing their reading comprehension skills.

The use of LLMs is not limited to traditional language learning scenarios. For instance, they have been used as creative writing tools by Swanson et al. [6]. By providing a few-shot learning scenario, LLMs can generate creative and coherent stories, thereby helping students improve their creative writing skills. This can foster creativity among students and help them express their thoughts more effectively.

Moreover, LLMs have shown promise in paraphrasing tasks, as discussed by Witteveen and Andrews [7]. Paraphrasing is crucial for language learners to understand and express the same idea in different ways. This can enhance learners' vocabulary and enable them to express themselves more effectively.

In conclusion, the potential of LLMs in language education is vast. From machine translation to creative writing, these models can revolutionize how we approach language learning. However, it is essential to use these tools responsibly and ethically, considering their impact on society.

Meantime, several areas warrant further exploration. The effectiveness of LLMs in different learning environments, such as online or blended learning, could be investigated. Additionally, research could focus on how these models can be tailored to cater to individual learning styles and needs.

Finally, while LLMs have shown promise in various aspects of language learning, their potential in other areas of education still needs to be explored. Future research could explore the use of these models in subjects like history, science, and mathematics.

In essence, while we have begun to scratch the surface of what LLMs can offer to language education, there is still a long way to go. With continued research and ethical considerations, we can harness the full potential of these models to transform language education.

In light of these developments and potential future directions, we invite researchers and practitioners to submit papers related to LLMs in education for consideration for publication in the *Educational Dimension* journal [1].

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