Chapter 20

Harnessing the Power of ChatGPT to Explore Student Metacognitive Skills in Learning Sociology Education

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ABSTRACT

In this study, ChatGPT and students studying the sociology of education discuss the potential application of AI applications in the field of metacognitive skills. This discussion contributes to the field of artificial intelligence research from a sociological perspective to comment on the significance potential of artificial intelligence language models in the humanities. As a result of the widespread adoption of ICT for pedagogical purposes, artificial intelligence has been introduced into the classroom, such as ChatGPT. It is used in several pedagogical contexts, such as adaptive learning systems, which change lesson difficulty in response to individual student progress.

INTRODUCTION

In the digital era, it is very important to improve students' metacognition skills, Cardoso et. al (2023). Students' metacognitive skills can help them make important contributions which can have an indirect positive effect on their academic results. Services aimed at improving students' metacognition are significant because they help children who are learning to self-regulate. They will be responsible for their own academic progress and will modify their study strategy as necessary to complete the objectives successfully. Self-regulated students do better in school because they are able to take charge of their education and learn on their own terms. Thus, it has been established that outstanding cognitive performance is associated with high levels of metacognitive abilities in domains as diverse as literature, mathematics, and information technology.

As a lecturer in a tertiary institution, it is very important to design learning activities that support increased metacognition, besides that the lecturer must have a strong understanding of new technologies to see threats and opportunities in the right context, Muthmainnah, et al. (2023). There is no denying that ChatGPT is an increasingly popular technology trend with game-changing features that will, and do, have to, change the stale approach to higher education teaching and evaluation. As a result of this shift, researchers may need to devote more time and energy to identifying and meeting the demands of the many constituencies of transformation education.

This does not mean that new teaching methods are always superior to those that have existed for some time. Each standard approach has proven successful at various points in time. New requirements for learning, however, are unavoidable given the shift in learner attitudes that accompany technological and societal developments Lun, et al (2023). Chatbots are here to stay whether we like it or not, their popularity is growing, and they are becoming a new trend that is already substantial. As this research will outline, educators must view upheaval as an opportunity to significantly increase the effectiveness of teaching in the digital age as needed.

Personalized learning is a teaching method that emphasizes the need to adapt lessons to each student's particular background, interests, and skill level. By assessing the learner's language patterns, feedback, and performance, the learning model by integrating ChatGPT can design individual lesson plans that incorporate optimal learning materials, exercises, and evaluations for that student Kılınç, (2023). When it comes to increasing student success, personalized instruction can be invaluable. Academic success, motivation, and self-confidence were all found to increase with individualized instruction, which concomitant with increased metacognition. Students are more likely to learn and retain information when they are exposed to content tailored to their individual needs and expertise. By using an interesting learning processing model such as ChatGPT, educators can provide maximum individual lessons to their students Qadir, (2023).

When students interact with this model, they can assess their level of comprehension as they react to a question and then alter their input accordingly. Students can use this information to gain a better understanding of their strengths and areas for improvement. The processing approach can also alter classes to meet unique needs based on each student's remarks and success. This plan may include additional reading, quizzes, or practise exercises, depending on the student's needs. This methodology can inspire students to take an active role in their own education by identifying precise measures that must be done to reach predefined goals.

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