Artificial Intelligence as a Policy Response to Teaching and Learning Issues in Education in Ghana

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Abstract : This research explores how Artificial Intelligence (AI) can be utilized as a policy response to address teaching and learning (TL) issues in education in Ghana. The dual (AI and human) instructor model is used as a theoretical framework to examine how AI can be employed to improve teaching and learning processes and to equip learners with the necessary skills in the emerging AI society. A qualitative research design was employed to assess the impact of AI on various TL issues, such as teacher workloads, a lack of qualified educators, low academic performance, unequal access to education and educational resources, a lack of participation in learning, and poor access and participation based on gender, place of origin, and disability. The study concludes that AI can be an effective policy response to TL issues in Ghana, as it has the potential to increase students' participation in learning, increase access to quality education, reduce teacher workloads, and provide more personalized instruction. The findings of this study are significant for filling in the gaps in AI research in Ghana and other developing countries and for motivating the government and educational institutions to implement AI in TL, as this would ensure quality, access, and participation in education and help Ghana industrialize.

Keywords: artificial intelligence, teacher, learner, students, policy response

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