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The Impact of Trust on the Acceptance of Artificial Intelligence Tools in Programming Education*

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Abstract

This paper presents the results of a study on the acceptance of artificial intelligence, in the form of the ChatGPT tool in programming education. Despite the increasing amount of research in artificial intelligence, there are still research areas whose exploration can contribute to a deeper understanding of AI applications. Such areas include education and management. This study aimed to identify factors influencing the acceptance of AI technology in the form of ChatGPT in programming education among pupils and students and to investigate the role of trust. The study was based on the author's model, which implied constructs from established and widely used models such as UTAUT, SCT and IDT. The study involved 362 pupils and students learning programming in educational classes. Data obtained through a survey questionnaire were analysed, which measured the impact of constructs such as performance expectancy, effort expectancy, innovation characteristics, social influence, psychological needs and trust on acceptance. The results indicated that the most significant influences on acceptance were expected effort, trust and expected performance. The impact of trust on acceptance proved to be highly significant in this study. In contrast, psychological needs, social influence and innovation characteristics, although present, have a less significant impact on the respondents' decision to accept the ChatGPT tool.

Keywords: ChatGPT, technology acceptance, artificial intelligence in education, TAM, UTAUT, programming education

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