

ARTIFICIAL INTELLIGENCE ADOPTION AND ITS IMPACT ON THE COGNITIVE PSYCHOLOGY OF STATE UNIVERSITY UNDERGRADUATES IN SRI LANKA

L.P.T.S. Wickramanayaka^{1,*} and V. K. N. Gamini²

^{1,2}*Department of Information Systems, Faculty of Management Studies, Rajarata University of Sri Lanka, Mihintale, Sri Lanka*

*Corresponding author (Email: thanujawickramanayaka99@gmail.com)

ABSTRACT

The rapid advancement of AI technology has had profound implications for cognitive psychology among state university undergraduates in Sri Lanka. A significant knowledge gap is evident in the current research, highlighting the lack of understanding of the impact of AI adoption specific areas of cognitive psychology among these undergraduates. The objective of this study was to address this gap by examining the effects of AI adoption on cognitive functions such as working memory, memory retention, reading comprehension, and decision-making. This study employs a quantitative cross-sectional approach rooted in positivist research philosophy. A stratified random sample of students from state universities in Sri Lanka was surveyed using structured questionnaires to collect data. The theoretical model posits AI adoption as the independent variable, with four cognitive functions identified as the dependent variables. Statistical analyses were conducted using SPSS software, involving rigorous examination of the impact of AI adoption. Descriptive analysis indicated a strong level of agreement among the respondents on the premise of the study. The analysis revealed that AI adoption exhibited a significant positive relationship with all cognitive psychological variables, including working memory, memory retention, reading comprehension, and decision-making. Key findings indicate that, while AI adoption positively impacts working memory, memory retention, and decision-making, its effect on reading comprehension is comparatively less pronounced. Furthermore, the regression analysis suggested that a substantial portion of the variance in AI adoption among undergraduate students could be explained by the studied variables, while a considerable amount was influenced by other factors, highlighting an important limitation in the research. This study fills a critical gap in the literature on AI adoption and cognitive psychology among Sri Lankan State University undergraduates by addressing the paucity of research in this area. It is recommended to bridge this knowledge gap by offering valuable insights for researchers, educators, and policymakers and laying the groundwork for comprehending the impact of AI adoption on state university undergraduates. Future investigations into the complex interplay between cognitive psychology and AI adoption should explore additional variables or different samples to understand the intricate linkages influencing educational settings and verify the findings.

Keywords: AI adoption, cognitive psychology, memory retention, reading comprehension, working memory