ABSTRACT

The advancement of artificial intelligence through Large Language Models (LLMs), including ChatGPT, Gemini, and Claude, has shifted the paradigm of information seeking and academic task completion among university students. Despite these benefits, concerns have emerged regarding a potential decline in critical thinking skills and the risk of students encountering ***the Hallucination Trap****. This study mapped patterns of LLM use, evaluated learning process efficiency, and assessed the impact of students' technical competence in prompt engineering on information validity at Universitas Muhammadiyah Gorontalo. A quantitative, descriptive research design was employed. The sample comprised 96 active students from various academic cohorts, selected using the Proportionate Stratified Random Sampling technique. Data were analyzed descriptively, and the Respondent Achievement Level (RAL) was calculated using SPSS software. The findings indicate that LLMs have become integrated into students' routine academic activities, with ChatGPT as the most frequently used platform (38.5%) and reference searching as the most common academic task (34.5%). Regarding learning efficiency, the time efficiency indicator achieved the highest RAL score at 88% (categorized as Good/Efficient), while the verification burden indicator received the lowest score at 74% (categorized as Fair). For prompt engineering and hallucination risk variables, the output validation aspect attained the highest RAL score at 78.48%, and awareness of hallucination risk reached 73.89%. Overall, the use of LLMs was found to be effective in enhancing students' learning productivity; however, their implementation requires critical engagement and rigorous independent verification to ensure the validity and accuracy of learning outcomes.*

Keywords: *Large Language Model (LLM); Learning Efficiency; UTAUT; Prompt Engineering; Hallucination Trap*