
A Concept Paper: The Role of Artificial Intelligence in Promoting International Baccalaureates students' Essay Writing Skills using Self-Regulated Learning Model (SRL)

Qistina Ayuni Binti Muhamad Rizal¹, Melor Masdoki²

¹ Kolej MARA Banting, Banting, Selangor, Malaysia
E-mail: qistinaayuni@banting.km.edu.my

² Kolej MARA Banting, Banting, Selangor, Malaysia
E-mail: melor@mara.gov.my

Abstract

Academic essay writing and artificial intelligence (AI) such as ChatGPT and Gemini converge to establish a revolutionary intersection in education, each refining and reforming one another. AI improves academic writing by providing dynamic, interactive learning environments and individualised educational experiences through cutting-edge technologies and adaptable learning methodologies. The purpose of this study is to explore the role of ChatGPT and Gemini in academic essay writing from the perception of the International Baccalaureate Diploma Programme (IBDP) students. To meet these aims, this research builds upon Zimmerman's Cyclical Model of Self-regulated Learning (SRL) and a quantitative approach involving 600 respondents from Kolej MARA Banting (KMB), Malaysia, to gain insight into students' attitudes towards AI tools in writing academic essays that reflects their essay writing skills. This study follows the Zimmerman's Cyclical model of self-regulated learning which serves as the foundation hypothesis by outlining three recursive stages planning, performance and reflection. PLS-SEM measurement is proposed as the method to be used for this research as it has several formative indicators that to be analyzed. Hypotheses testing using 5000 samples through replication bootstrapping approach to test the non-parametric PLS estimation. This includes tests to determine the f^2 value, VIF and P value for the internal model. Findings predicted that the use of ChatGPT and Gemini will enhance students cognitive and metacognitive skills consists of planning, performance and reflection indicators. ChatGPT and Gemini will help to enhance student's essay writing process through idea generation, organization of points, develop sentence elaborations and making conclusions. Findings will also indicate the reception of how well AI-powered writing tools are received in the essay writing skills of IBDP students and demonstrates how AI helps students in metacognition to a considerable extent. Ultimately, the findings suggest that AI helps promote essay writing skills using the Self-Regulated Learning Model and it is beneficial to provide creative and interactive learning experiences. It is recommended for future research to design practical hypotheses, construct and analyze the possible indicators from qualitative or mixed method approach.

Keywords: *AI tools; Chatgpt; Gemini; essay writing; self-regulated learning; self-assessment*
