Development of Chatbot Supplementary Tool in Science and the Self-Regulated Learning Skills among the Grade 10 Students

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Abstract

This study focused on determining the effectiveness of a developed interactive chatbot as a supplementary tool in studying Science and observing the manifestation of self-regulated learning skills among the Grade 10 students in Mabato National High School. It used a descriptive developmental research design participated by 35 students. Using the Mean and Standard Deviation, results revealed that the features of the evaluated chatbot are highly effective. This implies that the developed interactive Science Chatbot can be used as supplementary material in studying Science in a blended learning modality. Most respondents manifested the description of Self-regulated Learning Skills in terms of goal setting, self-monitoring, self-instruction, and self-reinforcement. This means that the skills were present and visible during the material delivery. The respondents' Level of Satisfaction with the Use of Interactive Chatbot in terms of usage and content, language used, perception, and difficulties and limitations, most of them agreed that they were satisfied when using the developed interactive chatbot. For treating the difference in the pre-and post-test scores of the respondents in the science competencies test, a t-test was used. The results show a significant difference between the pre-test and post-test. It indicated that the chatbot features affect their test performance because they used it as a reviewer and can return to the topic that appears unclear to them. The result also implies that the chatbot was effective in assisting students in improving their performance on the science competencies test.

Keywords: Self-Regulated Learning Skills, Chatbot, Science Competencies, Supplementary Tool