

INTERACTIVE MOBILE APP LEARNING MATERIAL IN PHYSICAL SCIENCE AND THE PROBLEM- SOLVING SKILLS AND SCIENTIFIC LITERACY OF GRADE 12 STUDENTS

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ABSTRACT

Problem-solving abilities and scientific literacy are important life skills that 21st-century learners must enhance and strengthen (Rahayu, 2017; Yuliati, et. al, 2018). Teacher-made interactive mobile apps in Physical science can be one of the materials to be used to increase these life skills. Students' perception regarding the effectiveness of mobile app learning material may be related to their skills and literacy. Thus, the researcher aimed to determine the relationship between Grade 12 student's perception of the effectiveness of the interactive mobile app learning material in Physical Science and their problem-solving skills and scientific literacy. This study used a descriptive-correlational design participated by thirty-five students. Most of the students are 18 years old, female, and have a highly positive attitude towards technology. Based on the experts and students, the interactive mobile app learning material in Physical Science is highly acceptable and highly effective in terms of educational content, functionality, accessibility, and technological aspects. However, the findings revealed that there is a negative significant relationship between the perceived effectiveness of the interactive mobile learning material (functionality) and the students' problem-solving skills (evaluation). Further, the study also shows the significant difference and an increase in problem-solving skills and scientific literacy scores which imply that the interactive mobile learning material can help improve their skills and literacy. It describes that from basic level problem-solving skills and low proficient level of scientific literacy, the students were able to achieve exemplary level and high proficiency level, respectively, after utilizing the learning material. This result suggests that the interactive mobile app learning material in Physical Science can be used to enhance and strengthen students' problem-solving and scientific literacy skills.

Keywords: Interactive Mobile, Problem-Solving Skills, Scientific Literacy