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Analysis of the Science Literacy Profile of Students at State Junior High School

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ABSTRACT

Objective: This study aims to determine the achievement of scientific literacy skills of junior high school students in the competency aspect. The competency aspects measured in this study are the competence to explain scientific phenomena, interpret data and scientific evidence, and evaluate and design. **Methods:** The research was conducted using the test method. The data was collected using a competency aspect scientific literacy test using a multiple choice test of 20 items on the scientific literacy test. The sampling technique used stratified random sampling, amounting to 67 students. Data analysis techniques using quantitative descriptive. **Results:** Based on the research conducted by the results of data analysis, it was found that the scientific literacy aspect of students' competence was included in the low category, with an overall average of 55.15%. The aspects of scientific literacy competency measured in this study are explaining scientific phenomena, interpreting data and scientific evidence, and evaluating and designing. The results of each scientific literacy competency indicator are as follows: (1) students' ability to explain scientific phenomena, the average percentage only reaches the deficient category; (2) students' ability to interpret data and scientific evidence in the deficient category and (3) students' ability to evaluate and design in the deficient category. **Novelty:** This study reveals an urgent need to develop appropriate innovations, methods, and designs to improve students' science literacy, especially the learning models used. These findings encourage teachers to improve learning continuously.

INTRODUCTION

21st-century education plays a vital role in supporting the process of developing the quality of human resources, so the 21st century demands education to prepare students who can face global competition. Rohmawati et al. (2018) believe that one of the skills needed in the second century is scientific literacy. Scientific literacy is a person's ability to use scientific knowledge and processes to make decisions about the universe. Students with scientific literacy skills can apply the knowledge learned to solve problems in everyday life well (Jufrida et al., 2019).

Scientific literacy is an individual's scientific knowledge and use of knowledge to identify questions, acquire new knowledge, explain scientific phenomena, and draw evidence-based conclusions about issues related to science, an understanding of the distinctive characteristics of science as a form of human knowledge and inquiry, an awareness of how intellectual science, and technology, and culture, the environment and a willingness to engage in science, issues, and ideas related to science (Utami et al., 2022). Developing scientific literacy is very important because it can contribute to social and economic life and improve decision-making skills at the community and personal levels (Arrafi et al., 2022; Azura et al., 2021; Melinda et al., 2021; Salahuddin et al., 2021).

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