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Regina Atya Gading Balgis Solikha, Noly Shofiyah:

We have reached a decision regarding your submission to APPLICATION: Applied science in Learning Research, "Ethno-STEM-Based Science Learning Using Typical Foods of Sidoarjo to Improve Science Literacy Among Junior High School".

Our decision is to: Accept Submission

APPLICATION: Applied science in Learning Research

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Ethno-STEM-Based Science Learning Using Typical Foods of Sidoarjo to Improve Science Literacy among Junior High School

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DOI: <https://doi.org/10.32764/application.v5i2.6427>

Keywords: Science literacy, STEM, Ethnoscience

Abstract

The low level of science literacy among junior high school students indicates the need for contextual and meaningful learning. Therefore, this research aims to

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Ethno-STEM-Based Science Learning Using Typical Foods of Sidoarjo to Improve Science Literacy among Junior High School

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Abstract : *The low level of science literacy among junior high school students indicates the need for contextual and meaningful learning. Therefore, this research aims to determine the effect of Etno-STEM-based science learning on Sidoarjo's typical foods on junior high school students' science literacy. This research used a one-group pretest-posttest design with purposive sampling. The subjects of this study were 20 eighth-grade students at a junior high school in Sidoarjo Regency. The research instrument consisted of 15 multiple-choice questions based on three indicators of science literacy, namely explaining phenomena scientifically, evaluating and designing scientific investigations, and interpreting data and evidence scientifically. The pretest and posttest data were analyzed using the N-Gain test and paired t-test to determine the level of improvement and the significance of the difference in students' science literacy skills. The N-Gain analysis showed a value of 0.89 for the indicator of explaining phenomena scientifically, 0.79 for the indicator of evaluating and designing scientific investigations, and 0.78 for the indicator of interpreting data and evidence scientifically. All three values were in the high category, indicating an improvement in students' science literacy skills. These findings were reinforced by the results of the paired t-test, which showed a significance value of < 0.05, so it can be concluded that Etno-STEM-based science learning using Sidoarjo's typical foods had a significant effect on students' science literacy.*

Keywords : *Ethno-STEM; Sidoarjo food typical; Science literacy.*

INTRODUCTION

The 21st century is marked by rapid developments in science and technology, which require the education sector to prepare students to face competition in the era of the global economy (Pratiwi et al., 2019). In facing these challenges, education plays an important role in producing human resources capable of solving various problems in life. One of the efforts that can be taken to improve the quality of human resources is through improving science literacy skills (Pratiwi et al., 2024).

Science literacy is defined as the ability to engage reflectively with issues and ideas related to science (OECD, 2023a). Science-literate individuals are willing to engage in reasoned discussions about science and technology, with key competencies including the ability to explain phenomena scientifically, evaluate and design scientific investigations,