



Validity of Science Literacy on the Respiratory System in Indonesia's Merdeka Curriculum

Putri Apriliyani¹, Endang Susantini², Yuliani³
^{1,2,3} State University of Surabaya, Surabaya, Indonesia



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ABSTRACT

Objective: The objective of this study is to produce a junior high school-level scientific literacy test on the topic of the human respiratory system in the Merdeka Indonesia curriculum. **Method:** The method used in this study is a modified research and development method. The data collection technique carried out using the validation method of Aiken calculations. The scientific literacy test instrument was developed using scientific literacy indicators from the adaptation of Gormally et al. (2012) combined with learning objectives (TP). Then it was validated by three validators who are experts in their fields. The validator provides a Likert scale score (1-4) and suggestions as material for consideration for improvement. The validator assesses the instrument based on aspects of material substance, construction, and language. The research data were analyzed quantitatively and descriptively. **Results:** The results of the validation were then carried out by Aiken calculations, with very valid results, namely the value of $V \leq 0.8$ on the substance aspect of 0.89, the construction aspect of 0.94, and the language aspect of 0.93. The scientific literacy instrument developed are valid and can be used to measure the scientific literacy of junior high school students in the Merdeka Indonesia Curriculum. **Novelty:** This research can provide an overview of scientific literacy instruments that are in accordance with the Merdeka curriculum, which can motivate teachers to train scientific literacy.

INTRODUCTION

Education in the 21st century encourages students to be reliable and of good quality to face the challenges of the globalization era (Afandi et al., 2019). In this era, it is expected to have increased ability and understanding of science and technology which is the key progress of a nation (Fahmiati et al., 2017). Education and curriculum are interconnected and curriculum can improve education (Campbell, 2020). Therefore the curriculum should be evaluated dynamically and periodically following the times, especially science and technology (science technology). The curriculum should also be prepared by taking into account the competencies needed by the community and future graduates (Mukminin et al (2019). Merdeka curriculum is a form of evaluation of the previous curriculum (Lestari et al., 2023). Based on Permendikbudristek No. 56 of 2022 the Merdeka curriculum is a curriculum with various intra-curricular learning, where the content is more optimal so that students can deepen concepts and strengthen competence (Ministry of Education and Culture, 2022b). Merdeka curriculum has the concept of independent learning (freedom in thinking) (Indarta et al., 2022). In addition, it seeks to develop skills and competencies according to the achievements of students (Ministry of Education and Culture, 2022a). Merdeka curriculum can accommodate students' potential, and attitudes to achieve 21st-century skills (Purnomo et al., 2023; Maipita et al., 2021). Incorporating competencies into the curriculum makes it possible

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