

Indigenous Knowledge among Artisans Can Promote Scientific Literacy for Education in the Thailand 4.0 Era: Perspectives of Thai Science Scholars

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ABSTRACT

Thailand development policy focuses on developing people of all ages and building up their Thainess to create a strong society with high morality. The learning process and curriculum are relevant to the locality. This paper explores the meaning of scientific literacy and the guidelines for teaching by using indigenous knowledge among artisans to promote scientific literacy drive for education in the Thailand 4.0 era. The data were collected through focus group discussions using five questions about scientific literacy. The participants were eight Thai science scholars, selected by purposive sampling, who have experience in science education. The ideas of each Thai scholar are summarized by the researcher and are confirmed by the individuals. This study found that the meaning of scientific literacy is the individual's knowledge, understanding, and ability to use scientific knowledge, scientific processes, and scientific mindset to analyze and evaluate information, construct scientific concepts, as well as apply knowledge to solving problems in his or her daily life. The findings can be used to design and develop science curriculum. Science educators should collect and analyze information, creating science curriculum and textbooks integrated with indigenous knowledge that artisans could use to create products or inventions with modern science and technology to add value to the existing ones and transfer knowledge to other areas. This would result the student's life and career skills development, leading to the commercial value-adding. This could move Thailand from a middle-income country to a high-income country.

Keywords: Indigenous knowledge, Artisan, Scientific literacy, Education in the Thailand 4.0 era