IJORER : International Journal of Recent Educational Research
Homepage : https://journal.ia-education.com/index.php/ijorer
Email : ijorer@ia-education.com

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 6 No. 1, January 2025
Page 170-182

Scaffolding Based On Scientific Creativity Learning (SSCL): An Innovative Learning Model To Improve Student's Skill in Scientific Creativity

Sri Astutik[1*], Nuriman[1], Supeno[1], Siti Maria Wardayati[1], Alfi Arif[1], Senny Weyara Dienda[1], Nining Indah Wahyuni[1], Khoirun Nisa'[2]
[1]University of Jember, Kalimantan[st] number 37, Jember, Indonesia
[2]National Dong Hwa University, Hualien, Taiwan (ROC)

Check for updates

DOI: https://doi.org/10.46245/ijorer.v6i1.757

Sections Info
Article history:
Submitted: December 28, 2024
Final Revised: January 8, 2025
Accepted: January 9, 2025
Published: January 31, 2025

Keywords:
Creativity Model;
Innovative Learning;
Scaffolding Based on The Scientific;
Scientific Creativity Skills.

ABSTRACT

Objective: Describe The development of the SSCL model, including validity, practicality, effectivity, and student response with the implementation of learning and student activities. This study aimed to obtain validity, practicality, effectivity, and student responses to the SSCL model in Junior high school. **Method**: This type of research is Research and Development (R&D) research oriented towards product development using the ADDIE development model—determination of the research location using a purposive sampling area. The sample in this study was student class VIII. **Results**: The results showed (1) the validity and reliability are very valid and very reliable, (2) an improved indicator of achievement with high category, (2) most of the students gave responses that scaffolding based on Scientific Creativity Learning (SSCL) models enabled them to practice scientific creativity skills in junior high school. **Novelty**: This research emphasizes using scaffolding for Proximal Zone Development (ZPD) approach students and students' initial conceptions of learning science. The result findings show that each phase of SSCL significantly contributes to increasing the achievement of indicators of scientific creativity.

INTRODUCTION

Today's learning requires teachers and students to master life skills, especially 21st-century skills. The skills needed include critical thinking skills and problem-solving, communication, collaboration, creativity, and innovation (Dilekçi & Karatay, 2023; Irwan et al., 2024; Nurhayati et al., 2024; Sari et al., 2024; Thornhill-Miller et al., 2023; Xu et al., 2023). According to Astutik et al. (2024), higher thinking skills are complex thinking processes in describing material, drawing conclusions, constructing representations, analyzing, and constructing relationships involving the most basic mental activity. These are 21st-century skills, commonly called the four C's (4C's) (Saphira & Prahani, 2022; Sari et al., 2024). The 4-C approach is oriented towards higher-order thinking skills (HOTs), which are thought to improve student achievement and improve students' higher-order thinking skills as scientific creativity skills.

The research results were conducted by PISA on an ongoing basis and started in 2003, 2009, 2012, 2015, and 2018. PISA specifically assessed creative problem skills (OECD, 2013). The results of studies based on TIMSS and PISA show that Indonesian students' collaborative problem-solving skills are classified as low-level. Minister of Solving Education and Culture Regulation No. 54 of 2013 concerning Competencies for Middle School Student Graduates states that the competency that Middle School students must achieve through science learning is the ability to think and act effectively

13. 757-Sri Astutik.doc

ORIGINALITY REPORT

20%	14%	10%	8%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	files.eric.ed.gov Internet Source	6%
2	fdokumen.id Internet Source	3%
3	Ahmad Fauzi Hendratmoko, Madlazim Madlazim, Wahono Widodo, Sri Astutik. "Debate Based on Inquiry Learning (DBOIL): An Innovative Learning Model to Improve Students' Skills in Scientific Argumentation", TEM Journal, 2024 Publication	3%
4	journal.ia-education.com Internet Source	2%
5	Submitted to Lambung Mangkurat University Student Paper	1%
6	Muhammad Arifuddin, Syamsul Bachri Thalib, Jasruddin Jasruddin, Muhammad Sidin Ali. "The Development of Modeling Physics Learning to Improve Critical Thinking Ability	1%