Literature Study: Analysis of Implementation Children Learning in Science Learning Model in Elementary Schools

Conny Dian Sumadi *

* Universitas trunojoyo Madura, Jawa Timur, Indonesia

Conny.diansumadi@trunojoyo.ac.id, https://orcid.org/0009-0001-2709-9202

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Abstract

This research aim to examine the literature on the analysis of the Implementation of the Children Learning in Science (CLIS) Learning Model in Elementary Schools. The data source used is research that has been published in scientific journals in Indonesia. The technique used is the purposive sampling technique via Google Scholar. This literature study was obtained from research articles from 2019-2024. The reference article focuses on the Children Learning in Science (CLIS) model in elementary schools. The method used in this study is a literature study by identifying, screening and eligibility for 8 articles were selected that were relevant to the aims and problems raised by the author. It can be concluded that the implementation of Children Learning in Science (CLIS) gives good results in learning especially in Science matters. The results are not only for the learning outcome but also in learning activities, science process skill

Keywords – CLIS; Science; Elementary School

1. Introduction

Science study about the relationship between humans and nature through the process of observing, collecting material logically, systematically with the aim of discovering concepts (Tistawati, 2022), (Saputra, 2023). In accommodating the science learning process, there needs to be a delivery method and process with the right model (Sumadi et al., 2022). The learning model used will be very influential on the success of the learning process. The current learning process means that teachers are more active than students. Students are used to listening, and given fewer opportunities to search for and build knowledge independently (Sidik, 2016), (Darsanianti et al., 2024), (Krismayoni & Suarni, 2020).

The CLIS model in learning can develop an idea from a problem through experiments by requiring students to be active. The learning using the CLIS model emphasizes hands-on/mind-on activities for students. The CLIS learning model is based on the constructivist view, that children construct or build knowledge. Learning using the CLIS model connects initial knowledge with the knowledge to be taught (Sidik, 2016). The CLIS model can foster active and positive habits within improve student's science process skills. Using the CLIS model, students can be motivated in learning activities because they are fun and the teacher links the knowledge between students and the learning material to be studied. Learning using this model can help students understand learning with questions that are easy for students to understand (Nugraha et al., 2023). The experiences that students experience themselves in everyday life can be used as material for teachers to ask questions (Haerunnisa, 2023). The Children Learning in Science (CLIS) learning model aims to form knowledge or concepts into the memory of students so that the knowledge or concepts can be stored in the students' memories for a long time (Ginanjar et al., 2019).

The CLIS (Children Learning In Science) learning model is a learning model that seeks to develop students' ideas or ideas to create science learning that is based on the student's own experiences and lives. In the implementation of the

Children Learning in Science (CLIS) learning model of course there are steps in implementing it. The steps in the Children Learning in Science (CLIS) learning model consists of five main stages, namely orientation (a) elicitation of ideas (b) restructuring of ideas (c) implementation of ideas or application of ideas (d) review of changes in ideas (e) The idea rearrangement stage is still divided into three parts (i) the exposure to a conflict situation (ii) the construction of new ideas (iii) the construction of new ideas and evaluation (Krismayoni & Suarni, 2020).

Learning activities that use the CLIS model involve students in practical activities, experiments, presenting, interpreting, predicting, and concluding. This allows students more than active in groups, construct their knowledge, and be directly involved in learning activities. CLIS learning model can create an active and enjoyable learning atmosphere so that students obtain optimal learning outcomes. The CLIS learning model aims to increase visual, oral, listening, writing, mental, motoric, and emotional activities in science learning. Learning by doing is a learning concept that requires the integration of efforts to gain impressions by doing (Tistawati, 2022).

Looking at the background and several opinions above, the author is interested in conducting research entitled "Literature Study: Analysis of the Implementation of the Children Learning in Science (CLIS) Learning Model in Elementary Schools" by conducting a literature review. The problem formulation in this research is 1) How to apply the CLIS model to elementary school science lessons using content analysis in several educational scientific journals published in Indonesia from 2019-2024. It is hoped that the results of this research can add comprehensive insight as a basis for conducting CLIS research. This also provides a brief overview of the theoretical frame of reference for applying the CLIS model to elementary science subjects.

2. Method

The data source used is research that has been published in scientific journals in Indonesia. The technique used is the purposive sampling technique via Google Scholar (Sumadi, 2023). This literature study was obtained from research articles from 2019-2024. The reference article focuses on the Children Learning in Science (CLIS) model in elementary schools. Article selection is carried out through an identification, screening, and eligibility process. Of the many articles found through searches on Google Scholar, 8 articles were selected that were relevant to the aims and problems raised by the author (Sumadi et al., 2022).

3. Result and Discussion

The results presented in the table below:

Table 1. Analysis of Literature Search Synthesis

No.	Author	Types of research	Grade	Result
1	(Darsanianti et al., 2024)	Experiment One group pretest-posttest	5th	The Children Learning in Science learning model can improve student learning activities
2	(Krismayoni & Suarni, 2020)	Quasi experiment Nonequivalent post-test only control group design	5th	The CLIS model is more optimal than the conventional model
3	(Hujrotunnah diyah & Ratnasari, 2023)	Pre-experimental One Group Pretest-Posttests	5th	The Children Learning in Science (CLIS) learning model on the science learning outcomes of grade V students is influence in science learning
4	(Franata et al., 2022)	Pre-experimental One Group Pretest-Posttests	5th	The Children Learning In Science (CLIS) model can improve student learning outcomes
5	(Haerunnisa, 2023)	Class Action Research	4th	The Children Learning in Science learning model can

				improve student learning outcomes in the second cycle
6	(Tistawati, 2022)	Class Action Research	5th	The Children Learning in Science learning model can improve student learning activities
7	(Ginanjar et al., 2019)	Quasi experiment Non Equivalent Pretest-Posttest Control Group Design	5th	There is a difference in the increase in students' cognitive learning outcomes with the application of the Children Learning In Science (CLIS) learning model in the experimental class compared to the conventional learning model in the control class.
8	(Nugraha et al., 2023)	Quasi experiment pretest-posttest control group design	5th	The Children Learning In Science learning model can have an impact on the science process skills of students who use the Children Learning In Science learning model compared to those who do not use the Children Learning In Science learning mode

Based on Table 1, the Analysis of Literature Search Synthesis shows that the implementation of the Children Learning in Science (CLIS) model yields positive results in learning, particularly in science subjects. These results are evident not only in learning outcomes but also in learning activities and science process skills. The most common method used to apply this model is experimentation with various treatment designs. The choice of research method must align with the research to be conducted (Randler & Bogner, 2008).

For the subject of the experiment, almost all implementations were conducted with 5th-grade students, categorized as higher-grade levels. According to Morin (n.d.), grades IV and V are years of growth in many ways—socially, academically, and physically—so that students can organize, plan, and begin to have an active social and emotional life. Socially, higher-grade students can effectively carry out the stages in the CLIS model.

The implementation of the CLIS model in science education at higher-grade levels provides opportunities for students to engage actively in experiments and scientific processes. This allows them to develop critical thinking skills, problem-solving abilities, and the capacity to work collaboratively. Additionally, this approach can increase students' interest and motivation in learning science, which, in turn, can improve their academic performance.

In conducting experiments, the variation in treatment designs may include different approaches, such as using instructional aids, conducting laboratory activities, or implementing inquiry-based projects. Well-structured research and the use of appropriate methods will ensure that the results obtained are reliable and contribute significantly to understanding the effectiveness of the CLIS model in science education.

Thus, the implementation of the CLIS model not only enhances students' learning outcomes but also develops essential skills and abilities for future learning. The appropriate selection of methods and subjects is crucial for achieving optimal results in this research.

4. Conclusion

Based on a review of literature studies and discussions that have been stated previously chapter. It can be concluded that the implementation of Children Learning in Science (CLIS) gives good results in learning especially in Science matters. The results are not only for the learning outcome but also in learning activities, science process skill

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