THEMATIC LEARNING WITH A SCIENTIFIC APPROACH IN ELEMENTARY SCHOOL: TEACHERS' PERCEPTIONS

Erma Suryani Sahabuddin[1], Widya Karmila Sari Achmad[2], Nur Fadhilah Alam[3], Latri[4]
[1,2,3,4]Elementary School Teacher Education, Faculy of Education, State University of Makassar
[1,2,3,4]Mallengkeri Raya Street No. 44, Makassar, South Sulawesi, Indonesia
E-mail: ermasuryani@unm.ac.id[1], wkarmila73@unm.ac.id[2], nurfadillah130399@gmail.com[3], latri@unm.ac.id[4]

Abstract:

Thematic learning with a scientific approach is being implemented in elementary schools. This approach highlights integrated and comprehensive learning on specific topics or themes, using the scientific method as the foundation for learning. This study aims to analyze teachers' perceptions of thematic learning with a scientific approach in elementary schools. The research employs a quantitative descriptive method, with teachers from upper-grade classes, specifically grades 4, 5, and 6, in 10 clusters of Mariorawa District Gugus 26 Primary Schools in Soppeng Regency as the subjects. The data collection was conducted by distributing questionnaires based on the topic. The results indicate that teachers' knowledge, thinking abilities, and emotional responses fall into the 'very good' category. However, the aspect of teachers' experience falls into the 'good' category. Therefore, this research is expected to contribute to the development of more effective policies and learning programs and to improve student learning outcomes.

Abstrak:

Pembelajaran tematik dengan pendekatan saintifik merupakan salah satu pendekatan yang dapat digunakan dalam pembelajaran di sekolah dasar. Pendekatan ini menitik beratkan pada pembelajaran yang terpadu dan komprehensif pada suatu topik atau tema tertentu, dengan menggunakan metode saintifik sebagai landasan pembelajarannya. Penelitian ini bertujuan untuk menganalisis persepsi guru terhadap pembelajaran tematik dengan pendekatan saintifik di sekolah dasar. Jenis penelitian ini adalah penelitian deskriptif kuantitatif dengan subjek penelitian yaitu guru pada kelas tingkat tinggi yaitu kelas 4, 5, dan 6 pada 10 kelompok Sekolah Dasar Gugus 26 Kecamatan Mariorawa Kabupaten Soppeng. Pengumpulan data dilakukan dengan menyebarkan kuesioner sesuai topik. Hasilnya menunjukkan bahwa aspek pengetahuan, kemampuan berpikir, dan perasaan guru berkategori sangat baik. Namun, aspek pengalaman guru berkategori baik. Dengan demikian, penelitian ini diharapkan dapat berkontribusi dalam membuat kebijakan dan program pembelajaran yang lebih efektif dalam meningkatkan hasil belajar siswa.

Keywords:

Teachers' Perceptions, Thematic Learning, Scientific Approach, Elementary School

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INTRODUCTION

As an integrative learning model, thematic learning emphasizes student activities holistically and meaningfully, exploring and discovering scientific concepts holistically and meaningfully with authentic assessment (Elisasmita & Desyandri, 2022). In this model, students can face situations involving knowledge and the environment while enjoying a pleasant learning atmosphere, making learning more active and directly involved in real life (Lin, Pol, & Korczak, 2022). In addition, thematic learning focuses on the active involvement of students in the learning process and directs them to become accustomed to existing regularities (Anggraeni, Roza, & Furkan, 2023). Through thematic learning, students can gain experiences that help them discover knowledge holistically, meaningfully, authentically, and enthusiastically (Dewi, Tampubolon, & Kresnadi, 2023).

Thematic learning is essential to implement in elementary schools, as students generally view everything holistically in this stage, and their physical development is inseparable from mental, social, and emotional development. Therefore, they can connect learned concepts and make learning more active and effective while building knowledge's integrity and continuity in the process (Yang, Sianturi, & Chen, 2022 ; Steed, Shapland, & Leech, 2022). This learning model allows students to find the answers (Safitri, Darmayanti, & Usmiyatun, 2023). This learning model uses a scientific approach, a method that gives students an understanding to recognize and understand various materials using a scientific approach (Rahmi & Landong, 2023). The scientific approach in thematic learning in elementary schools emphasizes student involvement in observing, clarifying, measuring, predicting, explaining, and actively concluding concepts (Adams, Koster, & Brok, 2022; Aditya, Andrisyah, & Ismiatun, 2021). This concept allows students to be more independent in obtaining information from various sources, not just relying on teacher instructions (Haines, 2021).

This method is supported by student-centred learning ideas, providing opportunities for students to seek knowledge independently (Khoury, 2022). Thematic learning using the scientific approach is designed to provide a deeper understanding of specific topics or themes within the elementary school context and increase students' interest in science and technology (Fajarwati, Indrianti, & Faiqotul, 2023; Idris, Talib, & Razali, 2022). This approach features integrated and comprehensive learning, allowing students to develop critical thinking and problem-solving skills. By utilizing a scientific approach to thematic learning, teachers can create a dynamic and innovative learning environment where students are directed to learn from various observation sources (Johnson & Gallagher, 2021). This will result in adequate learning conditions where students are encouraged to access information relevant to their needs and engage in an active and meaningful learning process.

Overall, the scientific approach to thematic learning at the elementary school level has several significant benefits. It helps students understand concepts more deeply, fosters a more significant interest in science and technology, and develops essential skills for success in the 21st century. By implementing this strategy, the teachers will see that their students are more engaged, motivated, and ready to face intellectual challenges in

science. Therefore, thematic learning with a scientific approach is one of the approaches that can be used in elementary school learning (Ghunu, 2022). This approach emphasizes integrated and comprehensive education on specific topics or themes, using scientific methods as the basis for learning (Zhou, Tigelaar, & Admiraal, 2022) . This approach helps students understand concepts more deeply and foster students' interest in science and technology. Moreover, with the development of technology, students can take advantage of it by searching for broader answers from materials or teacher directions, so the answer is not only one but various responses or opinions from students (Bardone, Rudsep, & Eradze, 2022 ; Zhou, Tigelaar, & Admiraal, 2022 ; Sahabuddin & Dirawan, 2022; Wati, Hastuti, & Mustadi, 2021).

One component that determines student success in learning is the teacher (H. Zhou & Tu, 2021). Therefore, teachers must always strive and innovate to select the appropriate learning strategies, models, and approaches (Zhou, 2022) . In education, the process only works when the learning atmosphere is pleasant. As a result, the learning process becomes passive. Thus, educators must understand learning approaches and techniques by understanding suitable and appropriate theories. Teachers' mastery of learning methods and techniques will facilitate students in understanding a lesson. Learning with this approach will provide a clear learning direction and goals, making it easier to determine the syntax more accurately (Aditya, Andrisyah, & Ismiatun, 2021). Teachers' perspectives are internal or external viewpoints that observe during the learning process of students (Abel, Tondeur, & Sang, 2022 ; Vigren, Alisaari, & Heikkola, 2022).

The teacher's internal perspective includes thoughts, beliefs, hopes, and emotions experienced by the teacher during the student learning process. An example is the teacher's belief about the effectiveness of thematic learning methods with a scientific approach in increasing students' understanding of concepts in elementary schools. Meanwhile, the external perspective reflects how the teacher understands and interprets the learning situation from an outside perspective, such as student responses, support from colleagues, school policies, and other environmental factors that influence the learning process. Teachers who can analyze the condition will be able to recognize their students' shortcomings and collaborate with peers to advance the quality of learning (Asrafil Husein La Ede & Maulina, 2022 ; Long, Sinclair, & Fraser, 2022).

Based on the interview results at SD Gugus 26 Marioriawa, Donri-Donri Subdistrict, Soppeng Regency, this school implements the 2013 curriculum with a thematic learning method. However, the evaluation results show that the students' average score in the odd semester is below the minimum passing grade of 75. This indicates a problem with the learning process that needs more active and teacher-centred, causing students to participate less in class and become easily bored. Despite this, there are relevant studies related to the research conducted. The first study highlights teacher performance in thematic learning of the 2013 Curriculum (Purwati, Darisman, & Faiz 2022); the second study discusses teachers' perceptions and implementation of the concept of independence in learning by Minister of Education Nadiem Makarim (Indrawami, 2022);

and the third study focuses on teaching approaches and applications for fostering scientific creativity in students by science teachers in Malaysia (Sidek et al., 2021). All three studies have similarities in discussing teachers' perceptions, roles, and strategies in conducting learning in school settings. The differences lie in the objects of study and research focus. The first study concentrates more on teacher performance in designing and implementing thematic learning, the second study is directed towards applying the independence in learning concept to improve the quality of thematic learning, and the third study focuses on teaching approaches that combine scientific creativity in science learning. Therefore, this research aims to analyze teachers' perceptions of thematic learning using a scientific approach at the elementary school level, helping comprehend teachers' views on this approach and improving effectiveness in developing learning programs in line with teachers' and students' needs. As such, this research is expected to create more effective policies and learning programs to enhance students' learning outcomes.

RESEARCH METHOD

This study aims to analyze teachers' perceptions regarding thematic learning using a scientific approach in elementary schools. The research method used is quantitative descriptive, which describes teachers' perceptions based on the collected and analyzed data (Sulistyawati, Wahyudi, & Trinuryono, 2022). This study was conducted in 10 elementary schools within cluster 26 of Marioriawa Subdistrict, Soppeng Regency, during the odd semester of the 2022-2023 academic year. The researchers used a stratified random sampling method to determine the research subjects, selecting teachers in grades 4, 5, and 6 from the 10 schools, resulting in 30 classes with 28 teachers. The data were collected through a questionnaire distributed to the research subjects to obtain information regarding teachers' perceptions of implementing thematic learning with a scientific approach in the 10 schools within cluster 26 of Marioriawa-Donri Donri Subdistrict, Soppeng Regency.

This research involved three main stages, namely the preparation stage, the implementation stage, and the final stage. In the preparation stage, the researchers carried out initial steps, such as developing a research proposal guided by two supervising lecturers, developing research instruments, validating research instruments, and applying for permission to conduct the research. Next, the researchers implemented the research by collecting the data through a questionnaire on teachers' perceptions of thematic learning with a scientific approach given to the research sample. The final stage of this research involved data analysis, where the researchers presented the analysis results and compiled a research report.

The data analysis technique used in this study is descriptive statistical analysis. The descriptive statistical analysis in this study was used to determine the percentage of frequency distribution data based on the collected data. The purpose of this descriptive statistic is to describe a situation as it is objectively without being influenced by the researchers (subjectively). The calculations used in this analysis are as follows:

$$P = \frac{F}{N} x\ 100\%$$

Description:
P = Percentage
F = Number of responses from respondents
N = Number of respondents

RESULTS AND DISCUSSION

Teachers' perceptions can be outlined in several aspects, which consist of aspects of classroom teachers' knowledge, aspects of thinking ability, aspects of teacher experience, and aspects of teacher feelings, as follows:

Classroom teachers' knowledge aspect of thematic learning:

1) Teachers understand that there has been a change in learning from subject-based to theme-based learning. Based on the research conducted, the following data analysis was obtained: there are 23 teachers or 82.1% who chose the option "Very Suitable" and 5 teachers agreed with "Suitable" with a percentage of 17.9%. Based on this, teachers have understood that learning has changed from the subject-based to the theme-based learning.
2) Teachers understand how to determine the steps in thematic learning. Teachers understand the syntax of thematic learning, and the statement obtained the following data analysis. There are 22 teachers, or 78.6%, who chose the option "Very Suitable", and six teachers agreed with "Suitable", with a percentage of 21.4%. Based on this, overall, teachers have understood how to determine the steps in thematic learning.
3) Teachers understand how to design a Lesson Plan for each thematic learning session. Based on the statement regarding teachers' understanding of how to design a Lesson Plan for thematic learning, the following data analysis was obtained: it can be seen that there are 21 teachers or 75.0%, who chose the option "Very Suitable". Seven teachers agreed with "Suitable" with a percentage of 25%. Based on this, teachers have understood how to design a Lesson Plan for each thematic learning session.
4) Teachers understand that thematic learning interrelates lessons with one another. The results obtained in the statement that teachers understand that thematic learning interlink lessons with one another are as follows: there are 16 teachers, or 57.1%, who chose the option "Very Suitable", and 12 teachers agreed with "Suitable"with a percentage of 42.9%. Based on this, it can be concluded that overall, teachers have understood that thematic learning interrelates lessons with one another.
5) Teachers understand that implementing thematic learning can use enjoyable methods. It can be seen that there are 17 teachers, or 60.7%, who chose the option "Very Suitable", and 11 teachers agreed with "Suitable", with a percentage of 39.3%. Based on this, overall, teachers have understood that the implementation of thematic learning can use enjoyable methods.

6) Teachers understand that learning can use various learning methods and can be done in groups or individually. The following data analysis was obtained based on the research conducted about the use of various learning methods conducted in groups or individually. There are 17 teachers, or 60.7%, who chose the option "Very Suitable" and 11 teachers agreed with "Suitable" with a percentage of 39.3%. Based on this, it can be concluded that overall, teachers have understood that learning can use various learning methods and can be done in groups or individually.
7) Teachers understand that the learning outcomes in thematic learning include three aspects: knowledge, skills, and attitudes. Teachers understand the learning outcomes in thematic learning that include three aspects; the following data analysis was obtained: 12 teachers chose "Suitable" with a percentage of 42.9%, and 16 teachers, or 57.1%, chose the option "Very Suitable". Based on this, it can be concluded that overall, teachers have understood that learning outcomes in thematic learning include three aspects: knowledge, skills, and attitudes.
8) Teachers understand that the student achievements can be measured through tests or non-tests. Teachers understand that student achievement can be measured through various tests and non-tests. Based on the research conducted, the following data analysis was obtained: 13 teachers agreed with "Suitable" with a percentage of 46.4% and 15 teachers, or 53.6% chose the option "Very Suitable". Based on this, it can be concluded that overall, teachers have understood that students' achievements can be measured through tests or non-tests.
9) Teachers understand that the student assessments are conducted continuously in thematic learning. The following data analysis was obtained based on the observation and questionnaire results of the research. There are 14 teachers, or 50.0%, who chose the option "Very Suitable" and 14 teachers agreed with "Suitable" with a percentage of 50%. Based on this, teachers have understood that student assessments are conducted continuously in thematic learning.

Aspects of elementary school teachers' thinking abilities towards thematic learning:

1) Teachers can integrate the thematic learning design by using non-monotonous learning models. The descriptive analysis results obtained from research on the integration of thematic learning with non-monotonous models can be seen in the following table: 17 teachers, or 60.7%, chose the option "Very Suitable", and 11 teachers chose "Suitable" with a 39.3% percentage. Based on this, teachers have integrated thematic learning design with non-monotonous learning models.
2) Teachers can integrate the thematic learning with appropriate learning media. The descriptive analysis results show that 11 teachers chose "Suitable" with a 39.3% percentage, and 17 teachers, or 60.7%, chose the option "Very Suitable". Based on this, teachers have been able to integrate thematic learning with appropriate learning media.
3) Teachers can integrate the objectives and indicators in thematic learning. The descriptive analysis results show that 23 teachers, or 82.1% chose the option

"Very Suitable", and 5 people chose the statement "Suitable" with a 17.9% percentage. Based on this, teachers have been able to integrate objectives and indicators in thematic learning.

4) Teachers can integrate the thematic learning implementation with enjoyable learning methods. The data show that 14 teachers or 50.0% chose the option "Very Suitable", and 14 teachers, with a percentage of 50%, chose the option "Suitable". Based on this, teachers have integrated thematic learning with enjoyable learning methods.
5) Teachers can integrate the thematic learning materials with appropriate learning media. The data show that 16 teachers or 57.1% chose the option "Very Suitable", and 12 teachers, or 42.9%, chose the option "Suitable". Based on this, teachers have been able to integrate thematic learning materials with appropriate media.
6) Teachers can integrate the thematic learning materials with themes and the realities of life. The data show that 15 teachers or 53.6% chose the option "Very Suitable", and 13 teachers, or 46.4%, chose the option "Suitable". Based on this, teachers have integrated thematic learning materials with themes and the realities of life.
7) Teachers can integrate the learning outcomes by summarizing learning from each lesson. The data show that 14 teachers or 50.0% chose the option "Suitable", and 14 teachers, or 50.0%, chose the option "Very Suitable". Based on this, teachers have been able to integrate learning outcomes by summarizing learning from each lesson.
8) Teachers can integrate the assessments of attitudes, knowledge, and skills according to indicators. The data show that 17 teachers, or 60.7%, chose the option "Very Suitable", and 11 teachers, or 60.7%, agreed on "Suitable". Based on this, teachers have been able to integrate assessments of attitudes, knowledge, and skills according to indicators.
9) Teachers can give meaning that the established theme is adjusted to the age and development of the students, including their interests, needs, and abilities. The data show that 13 teachers, or 53.6% chose "Suitable", and 15 teachers or 53.6% chose the option "Very Suitable". Based on this, teachers have been able to give meaning that the established theme is adjusted to the age and development of the students, including their interests, needs, and abilities.

Aspects of elementary school teachers' feelings towards thematic learning, as follows:

1) Teachers can design a lesson plan in thematic learning. It is observed that there are 8 teachers, or 28.6%, who chose the "Suitable" option and 20 teachers, or 71.4%, who chose the "Very Suitable" option. From this, it can be understood that overall, teachers have been able to design a lesson plan for thematic learning.
2) Teachers can formulate indicators based on essential competencies. It is observed that there are 8 teachers, or 28.6%, who think "Suitable" and 20 teachers, or 71.4%, who choose the "Very Suitable" option. From this, it can be

understood that overall, teachers have been able to formulate indicators based on essential competencies.

3) Teachers understand that learning activities can be done in groups, pairs, and individually. It is observed that there are 20 teachers, or 71.4%, who think "Very Suitable" and 8 teachers, or 28.6%, who think "Suitable". From this, it can be understood that overall, teachers have understood that learning activities can be carried out in groups, pairs, and individually.
4) Teachers understand that the implementation of thematic learning that they have done consists of initial activities, core activities, and final activities. It is observed that there are 11 teachers, or 39.3%, who think "Suitable" and 17 teachers, or 60.7%, who think "Very Suitable". Based on this, it can be understood that overall, teachers have understood that the implementation of thematic learning consists of initial, core, and final activities.

Aspects of elementary school teachers' experiences with thematic learning, as follows:

1) Teachers understand that they can create assessment instruments through written, oral, and performance tests. It is observed that there are 18 teachers, or 64.3%, who chose the "Very Suitable" option and 10 teachers, or 35.7%, who chose the "Suitable" option. Based on this, overall, teachers have understood that they can create assessment instruments in the form of written, oral, and performance tests.
2) Teachers can create and analyze competency standards, basic competencies, and indicators that are relevant to the theme. It is observed that there are 19 teachers, or 67.9%, who think "Very Suitable"and 9 teachers, or 32.1%, who think "Suitable". Based on this, it can be understood that overall, teachers have been able to create and analyze competency standards, basic competencies, and indicators that are relevant to the theme.
3) Teachers understand that the established theme has considered the environment closest to the students. It is observed that there are 20 teachers, or 71.4%, who chose the "Very Suitable" option and 8 teachers, or 28.6%, who chose the "Suitable" option. Based on this, teachers have understood that the established theme has considered the environment closest to the students.
4) Teachers understand learning with various methods that are enjoyable for students. It is observed that there are 15 teachers, or 53.6%, who chose the "Very Suitable" option and 13 teachers, or 46.4%, who chose the "Suitable" option. Based on this, teachers have understood learning with various enjoyable method.
5) Teachers understand various assessment methods/tools to obtain information as a reference plan for follow-up actions. It is observed that there are 19 teachers, or 67.9%, who chose the "Suitable" option and 9 teachers, or 32.1%, who chose the "Very Suitable" option. Based on this, it can be understood that overall, teachers have understood various assessment methods/tools to obtain information as a reference plan for follow-up actions.

Table 1. Research Results on Teachers' Perceptions of Thematic Learning with Scientific Approach in Elementary Schools

No	Aspect	Average	Persentage	Conclusion
1.	Knowledge	22.57	83.6%	Very Good
2.	Thinking Skills	15.86	79.3%	Very Good
3.	Emotions	12.28	80.6%	Very Good
4.	Experience	17.14	74.1%	Good

Based on the table above, teachers' perceptions of thematic learning with a scientific approach in elementary schools show that in the knowledge aspect, the average score obtained is 22.57, with a percentage of 83.6% included in the excellent category. This indicates that teachers have a good understanding of using thematic approaches in teaching and understand the change from subjects to themes. The aspect of teachers' thinking ability also obtained excellent results, with an average score of 15.86 and a percentage of 79.3%. This indicates that teachers can integrate thematic learning in a varied and enjoyable way for students. In addition, teachers' feelings also showed excellent results, with an average score of 12.28 and a percentage of 80.6%. Teachers can design lesson plans for thematic learning and formulate indicators based on basic competencies. Meanwhile, teachers' experience has good results, but it is slightly lower than the previous aspects, with an average score of 17.14 and a percentage of 74.1%.

This illustrates that teachers and well-received students have implemented thematic learning with a scientific approach in elementary schools well. In this context, this study's findings align with the research stating that thematic learning is an effective method for improving students' understanding and integrating different subjects within a single theme (Hilmi & Lena, 2022). Moreover, the scientific approach used in this thematic learning will help students develop critical thinking, problem-solving, and teamwork skills (Rohaeni, 2020).

These findings also depict the concept of the Zone of Proximal Development (ZPD) from Vygotsky (Rohaeni, 2020). These findings also depict the concept of the Zone of Proximal Development (ZPD) from Vygotsky (Slavin, 2018), stating that social interaction and collaboration with others, including teachers and peers, will help students increase their understanding and achieve higher learning potential. In the context of this research, teachers have successfully created a conducive learning environment for students to explore material thematically and collaboratively, thus facilitating the development of student's ZPD. Nevertheless, teachers' experience still needs improvement for implementing thematic learning with a scientific approach to enhance students' competencies and achievements more efficiently and effectively. This study recommends providing training, workshops, and collaborative discussions among teachers to share experiences and best strategies for implementing thematic teaching methods with a scientific approach. Therefore, teachers' competencies can be improved and significantly impact students' learning outcomes in elementary schools.

CONCLUSION

This study findings indicate that the teacher's perception of thematic learning with a scientific approach in elementary schools shows that the aspects of knowledge, thinking ability, and teacher's feelings are categorized as excellent. However, the aspect of the teacher's experience is categorized as good, so this method can become more efficient and effective in improving students' competence and achievement. The suggestions that can be given include the need for training, workshops, and collaborative discussions among teachers to share experiences and best strategies in implementing thematic learning methods with a scientific approach. Thus, teachers' competence can be improved and can significantly impact students' learning outcomes in elementary schools. For further research, it is recommended to explore factors that influence the effective implementation of thematic learning with a scientific approach and provide broader support for improving teachers' competence and experience in applying this method. In addition, further research can also investigate the impact of implementing thematic learning with a scientific approach on students' learning achievements and the development of 21st century skills to support their success in the future.

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