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Implementation of the Joyful Element Deep Learning Approach on Science Learning at SDN Kroyo 1 Sragen

Septyana Candra Puspita[1]*, Sri Wardani[2], Adinda Nova Permatasari[3], Indah Amelia Putri[4]
[1, 4]University of Sragen
[2, 3]Semarang State University
Corresponding Author: Septyana Candra Puspita septy.candra@unissra.ac.id

A R T I C L E I N F O

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A B S T R A C T

This research aims to describe the implementation of a deep learning approach with joyful elements in science learning at SDN Kroyo 1 Sragen. This approach emphasizes a learning process that is both fun and meaningful, encouraging active student involvement. The research employed a descriptive qualitative approach, with subjects comprising science teachers and students in grades IV and V. Data collection techniques included observation, in-depth interviews, and documentation. The research results show that the implementation of joyful elements in science learning is carried out through direct experimental activities, the use of interactive learning media, as well as strategies for building a positive classroom atmosphere. This approach has an impact on increasing students' interest in learning, participation, and understanding of concepts. Even though there are challenges such as limited facilities, teachers can overcome them with creativity and collaboration. This research recommends strengthening the role of teachers and school support to develop fun and meaningful learning.

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INTRODUCTION

Education in the 21st century demands a paradigm shift in the learning process, placing greater emphasis on active involvement, deep meaning, and enjoyable learning experiences for students. In this context, learning no longer only focuses on cognitive aspects, but also on character formation, critical, creative, collaborative thinking skills, and the ability to solve complex problems. One of the subjects that has great potential in developing these abilities is Natural Sciences (IPA) (Yuhana et al., 2022). Science, as a scientific discipline that emphasizes observation, experimentation, and understanding natural phenomena, provides ample space for the development of innovative and meaningful learning approaches (Sapitri et al., 2020).

Based on research results, it shows that science learning in elementary schools, especially at SDN Kroyo 1 Sragen, still faces various challenges. Some of these are the low interest and motivation of students in taking science lessons, the tendency of teachers to use monotonous lecture methods, and limitations in creating a pleasant learning atmosphere. This has an impact on students' low understanding of concepts and their performance in the learning process. Elementary school age is a golden period in forming the foundations of scientific thinking and a love of science. Therefore, a learning approach is needed that can foster students' overall sense of enjoyment, curiosity, and active involvement (Yuhana et al., 2022).

The approach that is considered relevant in overcoming this problem is the deep learning approach, which prioritises a deep, meaningful, and sustainable learning process. Deep learning in an educational context is not just the repetition of information, but an active process in which students construct knowledge based on experience, reasoning, and reflection. This approach consists of three main elements, namely joyful (fun), meaningful (meaningful), and mindful (aware and reflective) (Weng et al., 2023). In this research, the focus is directed at the element of joyful learning, namely, how to create a pleasant learning atmosphere so that it can increase student participation, motivation, and enthusiasm in learning science (Candra Puspita et al., 2023).

Joyful learning is not just about playing games or entertainment, but is a systematic effort to build a learning climate that is friendly, inclusive, full of appreciation, and allows students to feel comfortable and challenged intellectually (Puspita & Sugiyanto, 2025). This approach includes the use of interesting learning media, exciting experimental activities, project-based approaches, as well as the integration of technology or educational games that can stimulate students' curiosity. With a pleasant atmosphere, it is hoped that students will not only learn out of obligation, but because of an intrinsic drive to understand the natural phenomena around them.

SDN Kroyo Sragen 1, a public elementary school situated in a semi-urban area, faces challenges in integrating innovative approaches in science learning. By implementing a deep learning approach with joyful elements, teachers are required to be more creative and adaptive in designing learning experiences that are fun but still scientifically based. This process certainly cannot be separated from strengthening teacher capacity, providing relevant learning

resources, and supporting a conducive learning environment (Irmawati et al., 2021). This research examines the implementation of the joyful element deep learning approach in science learning at SDN Kroyo 1.

LITERATURE REVIEW

Science Learning in Elementary Schools

Natural Sciences (Science) is one of the important subjects in the elementary school curriculum because it is directly related to the development of students' logical, analytical, and scientific thinking abilities from an early age. Science helps students understand nature and the phenomena around them through observational, experimental, and theoretical approaches. Science learning in elementary schools aims to foster curiosity, critical thinking skills, and experience-based problem-solving skills (Sabri et al., n.d.).

Based on field data, it shows that science learning is still often theoretical and less contextual. Teachers tend to deliver material in one direction through lectures, while students passively receive information without being actively involved in the learning process. This has an impact on students' low understanding of concepts and interest in learning science. Therefore, a learning approach is needed that is able to liven up the science learning atmosphere and make students more active and enjoy the learning process (Gusnilawati & Hadiyanto, 2021).

Deep Learning Concepts in Education

The deep learning approach in the world of education does not refer to artificial intelligence, but to a meaningful and deep learning process (deep meaningful learning). Deep learning refers to students' active involvement in understanding concepts thoroughly, connecting them with real experiences, and being able to apply this knowledge in various contexts (Mystakidis et al., 2021). According to learning theory, learning occurs when students build meaning from new information, relate it to previous knowledge, understand the conceptual structure of the material, and apply it in real life. Deep learning is different from surface learning, which only emphasises memorising facts without deep understanding. In science learning, a deep learning approach can be carried out by providing explorative experiences, experiments, discussions, problem-based projects, and reflection (Approach, 2025).

Joyful Elements in Deep Learning

Deep learning in the context of the Independent Curriculum has three main elements: joyful, meaningful, and mindful. The focus in this research is on the joyful element, namely, how learning is designed to be fun, not stressful, and arouse students' enthusiasm. According to(Yuhana et al., 2022), joyful learning is a learning approach that makes students feel happy and enthusiastic about learning, so that their intrinsic motivation increases. Fun learning doesn't always have to involve games, but how the teacher builds a friendly classroom atmosphere, encourages participation, rewards effort, and packages material in a creative way that is relevant to students' lives (Nana & Brenya, 2024).

Joyful learning is essential to apply in science learning because it can change students' perceptions that science is not a complex or boring subject. In

a fun atmosphere, students are more open to challenges, actively ask questions, experiment, and feel safe in expressing opinions. This is in line with Vygotsky's view that learning takes place optimally when there is positive and supportive social interaction between teachers and students.

METHODOLOGY

This research uses a descriptive qualitative approach to describe in depth the implementation of the joyful element deep learning approach in science learning at SDN Kroyo 1. The study was carried out at SDN Kroyo 1, Kroyo District, Sragen Regency. This location was chosen because the school has implemented Independent Curriculum-based learning, which encourages meaningful and enjoyable learning. The subjects in this research were science teachers in grades IV and V, students in grades IV and V, and the school principal. To ensure the validity of the data, this research uses triangulation of sources and techniques, namely comparing data from observation, interviews, and documentation, as well as validating information from various informants (teachers, students, school principals) (Wardiah, 2021).

RESULTS AND DISCUSSION

This section discusses the findings obtained from qualitative methods, namely in-depth interviews, observations, and document analysis conducted at SDN Kroyo 1. The focus of the analysis is the implementation of the deep learning approach with joyful elements in science learning at SDN Kroyo 1. In the world of education in the 21st century, learning is no longer just about conveying material, but is more directed at how students can build deep, meaningful and enjoyable understanding. One approach that is currently developing is the deep learning approach, which emphasises an active, reflective and contextual learning process. In the context of the Merdeka Curriculum, this approach is enriched with three main elements: joyful, meaningful and mindful (Suprapmanto & Zakiyah, 2024).

The implementation of joyful elements is carried out using various creative and contextual strategies. Teachers design learning with a student-centred approach, where students become active subjects who are directly involved in the learning process. For example, in material about force and motion, the teacher invites students to play traditional games such as tug of war and jumping rope, then relates them to the concepts of muscle force and object motion. In this way, students not only learn concepts, but also experience directly the phenomena being studied. Apart from that, teachers also use interesting learning media such as animated videos, simple teaching aids, and digital quiz games based on Kahoot or Wordwall. The use of this media makes the class atmosphere lively, full of laughter, and far from a learning atmosphere. Joyful learning can also be seen when students are involved in simple experiments using tools and materials that are easily found at home, such as making a volcano erupt from soda and vinegar to explain chemical reactions and gas pressure (Yuhana et al., 2022).

Student involvement in learning activities is an indicator of the success of implementing joyful elements. Students appear enthusiastic, actively ask

questions, and enjoy working together in groups (Sapitri et al., 2020). They are no longer afraid of making mistakes, because the class atmosphere is built on mutual respect and support. Teachers also provide space for appreciation by giving simple awards such as star stickers, praise, or displaying students' work in class. This indirectly increases students' self-confidence and sense of pride in their learning results.

In the implementation process, teachers not only act as facilitators but also as companions who are sensitive to students' emotional needs. Teachers pay attention to students' psychological conditions, try to build warm and empathetic relationships, and create an emotionally safe learning space. This approach is in line with the principles of humanistic pedagogy and respects student diversity (Fitriyeni, 2023).

From the results of interviews and observations carried out, the implementation of a joyful approach in science learning has had a significant positive impact. Students show increased interest in learning, are more active in discussions, and are able to remember concepts better because they are connected to fun, hands-on experiences. Not only that, this approach also helps teachers identify students potential and develop more adaptive learning strategies. Implementing a joyful approach is not without challenges. Several teachers admitted that they still had difficulty preparing interesting teaching aids or learning media, especially amidst limited school facilities. In addition, designing learning that is fun but still meaningful requires creativity and sufficient preparation time. Therefore, continuous support is needed from the school, such as training, providing media, and collaboration between teachers in designing innovative learning (Viqri et al., 2024).

The implementation of a deep learning approach with joyful elements in science learning at SDN Kroyo Sragen is a clear example that science learning can be designed in a way that is more humane, interesting, and touches students' emotional aspects. Joyful learning not only makes students enjoy learning but also helps them form a strong and meaningful understanding of scientific concepts. In the future, this approach needs to continue to be developed and disseminated as part of the transformation of basic education that is pro-child (Yuhana et al., 2022).

From interviews with students, the majority revealed that they felt happy and not bored when studying science (Asysyifa et al., 2017). Some students who were previously passive began to show increased participation and courage in answering questions. Teachers also noted that the results of the formative assessment showed improvement, especially in understanding basic science concepts. Even though the results achieved are quite positive, teachers face challenges such as limited time in designing fun learning and limited supporting facilities, such as teaching aids or access to technology (Literasi & Di, 2024). However, teachers are still trying to find alternative solutions such as using used materials, surrounding natural resources, and collaboration between teachers. Science learning with a joyful learning approach creates a shift in students' attitudes and learning patterns that are more active, explorative and

confident. This shows that a positive emotional atmosphere greatly influences the success of meaningful learning (Sapitri et al., 2020).

CONCLUSIONS AND RECOMMENDATIONS

The implementation of a deep learning approach with joyful elements at SDN Kroyo 1 has succeeded in creating science learning that is more lively, active and liked by students. This approach is able to increase student participation and understanding of science concepts. Joyful learning is proven to be relevant to the characteristics of elementary school students. The suggestion is that teachers need to continue to develop creative learning strategies based on joyful learning, schools need to provide training and learning media that support a pleasant atmosphere, and further research is recommended to quantitatively examine the impact of this approach on student learning outcomes.

FURTHER STUDY

This research still has limitations, so further research is still needed on the topic "Implementation of the Joyful Element Deep Learning Approach on Science Learning at SDN Kroyo 1 Sragen".

REFERENCES

Approach, L. (2025). Strategies to develop students' learning interest through a deep learning approach. 4, 8–16.

Asysyifa, D. S., Sopyan, A., & Masturi. (2017). Pengembangan Bahan Ajar IPA Berbasis Komplementasi Ayat-ayat Qur'an pada Pokok Bahsan Sistem Tata Surya. Upej, 6(1), 45–54.

Candra Puspita, S., Wardani, S., & Sumarti, S. S. (2023). Clinical Supervision to Grow Scientific Literacy Through Teaching Materials Based on Local Wisdom in Pati Regency at Grade IV Elementary School Students. International Journal of Research and Review, 10(8), 472–478. https://doi.org/10.52403/ijrr.20230859

Fitriyeni, F. (2023). Pengembangan LKPD Digital Berbasis Etnosains Melayu Riau pada Muatan IPA Sekolah Dasar. Journal Basicedu, 7(1), 441–451. https://doi.org/10.31004/basicedu.v7i1.4399

Gusnilawati, H., & Hadiyanto. (2021). Pelaksanaan Supervisi Klinis Untuk Meningkatkan Proses Pembelajaran IPA di Sekolah Dasar. Jurnal Edukasi Matematika Dan Sains), 9(1), 113–118.

Irmawati, I., Syahmani, S., & Yulinda, R. (2021). Pengembangan Modul IPA Pada Materi Sistem Organ Dan Organisme Berbasis STEM-Inkuiri untuk Meningkatkan Literasi Sains. Journal of Mathematics, Science and Computer Education, 1(2), 64.

Literasi, M., & Di, S. (2024). INOVASI PEMBELAJARAN IPA BERBASIS KECERDASAN BUATAN: 1(1), 1–6.

Mystakidis, S., Berki, E., & Valtanen, J. P. (2021). Deep and meaningful e-learning with social virtual reality environments in higher education: A systematic literature review. Applied Sciences (Switzerland), 11(5).

Nana, A., & Brenya, Y. (2024). Deep learning in high schools: exploring pedagogical approaches for transformative education. 24(2), 111–126. https://doi.org/10.21831/hum.v24i2.71350.

Puspita, S. C., & Sugiyanto, N. (2025). Analisis Implementasi Kurikulum Merdeka Pada Muatan Pembelajaran IPAS Kelas IV SDN Sugihan Kabupaten Pati. 5, 5751–5759.

Sabri, T., Hery Kresnadi, Mp., & Ketua Jurusan Pendidikan Dasar Aswandi Maridjo Abdul Hasjmy, D. H. (n.d.). PENINGKATAN KETERAMPILAN PROSES SAINS SISWA MELALUI PENDEKATAN KETERAMPILAN PROSES DALAM PEMBELAJARAN IPA KELAS III SD ARTIKEL PENELITIAN HERU SETIAWAN NIM: F37008044 Disetujui Pembimbing I Pembimbing II.

Sapitri, R. D., Hadisaputra, S., & Junaidi, E. (2020). Pengaruh penerapan praktikum berbasis kearifan lokal terhadap keterampilan literasi sains dan hasil belajar. Jurnal Pijar Mipa, 15(2), 122–129. Suprapmanto, J., & Zakiyah, S. W. (2024). Analisis Permasalahan Analisis Permasalahan Pembelajaran IPAS pada siswa kelas 4 SD. Jurnal BELAINDIKA (Pembelajaran Dan Inovasi Pendidikan), 6(2), 199–204. https://doi.org/10.52005/belaindika.v6i2.232

Viqri, D., Gesta, L., Rozi, M. F., Syafitri, A., Falah, A. M., Khoirunnisa, K., & Risdalina, R. (2024). Problematika Pembelajaran IPAS dalam Kurikulum Merdeka. Jurnal Inovasi, Evaluasi Dan Pengembangan Pembelajaran (JIEPP), 4(2), 310–315.

Wardiah, R. (2021). Upaya Meningkatkan Kemampuan Pemahaman Konsep IPA Siswa Pada Pokok Bahasan Sifat-Sifat Cahaya Menggunakan Metode Eksperimen Di Kelas VIII. Jurnal ESTUPRO, 6(1), 65.

Weng, C., Chen, C., & Ai, X. (2023). A pedagogical study on promoting students' deep learning through design-based learning. International Journal of Technology and Design Education, 33(4), 1653–1674. https://doi.org/10.1007/s10798-022-09789-4

Yuhana, U. L., Imamah, I., Fatichah, C., & Santoso, B. J. (2022). Effectiveness of Deep Learning Approach for Text Classification in Adaptive Learning. Jurnal Ilmiah Kursor, 11(3), 137.