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The Effect of Joyful Learning Based on Deep Learning on Motivation and Interest in Learning Natural and Social Sciences Among Fifth-Grade Students

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Abstract

This study examined the implementation of Joyful Learning based on the Deep Learning approach and its effect on fifth-grade students' motivation and interest in learning Natural and Social Sciences (IPAS) at SD Inpres Sanging-Sanging, Gowa Regency, Indonesia. The study used a quantitative design involving all 48 fifth-grade students as respondents through total sampling. Data were collected using questionnaires and classroom observation, while data analysis was conducted using validity testing, reliability testing, normality testing, descriptive analysis, and regression analysis with SPSS 26. The classroom observation showed that the implementation of Joyful Learning was generally categorized as good, although problem-solving activities still required pedagogical strengthening. The instruments were valid and reliable, with Cronbach's alpha values of 0.777 for Joyful Learning, 0.899 for learning motivation, and 0.866 for learning interest. The SPSS coefficient tables showed a positive but statistically non-significant effect of Joyful Learning on learning motivation (B = 0.395; beta = 0.267; t = 1.875; p = 0.067) and learning interest (B = 0.062; beta = 0.057; t = 0.389; p = 0.699). These findings indicate that Joyful Learning has pedagogical potential for creating an enjoyable and student-centered classroom atmosphere, but its statistical effect in this sample was limited. The study recommends strengthening teacher creativity, classroom interaction, and problem-solving facilitation in implementing Joyful Learning in primary education.

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Keywords: Joyful Learning; Deep Learning; learning motivation; learning interest; primary education; IPAS

INTRODUCTION

Education in Indonesia continues to face fundamental challenges related to learning quality, classroom effectiveness, and students' readiness to participate actively in learning. Although access to primary and secondary education has improved, learning outcomes still require serious attention, particularly in literacy, numeracy, and scientific reasoning. The thesis that forms the basis of this article emphasizes that classroom transformation should begin from the learning process itself, because conventional teacher-centered instruction tends to limit students' participation, curiosity, and critical thinking.

The Indonesian education system has promoted several pedagogical approaches, including active learning, contextual teaching and learning, and student-centered learning. However, many classrooms still rely heavily on one-way explanation, memorization, and passive student participation. Such learning conditions may reduce students' motivation and interest, especially in Natural and Social Sciences (IPAS), a subject that ideally requires inquiry, contextual experience, exploration, and meaningful interaction with everyday phenomena.

Deep Learning in an educational context refers to learning that develops meaningful understanding, critical reasoning, reflection, and the ability to apply knowledge in different contexts. This concept differs from shallow learning, which prioritizes memorization without conceptual depth (Marton & Saljo, 1976). In the Indonesian pedagogical context, Deep Learning is understood through mindful, meaningful, and joyful principles. Joyful Learning is closely aligned with this framework because it creates a classroom atmosphere that supports positive emotions, curiosity, participation, and engagement.

Preliminary observation in the fifth grade at SD Inpres Sanging-Sanging indicated that students' motivation and interest in IPAS learning were still relatively low. Some students showed limited attention during lessons, low participation in classroom interaction, weak responses to teacher questions, and insufficient completion of learning tasks. Approximately 40 percent of students were reported as not completing assigned tasks. This situation indicates the need for a learning approach that can stimulate participation, encourage positive learning experiences, and support students' willingness to learn.

Based on this context, this article aims to analyze the implementation of Joyful Learning based on the Deep Learning approach and examine its effect on students' learning motivation and

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learning interest in IPAS. The study is expected to contribute to primary education practice by offering empirical insight into the pedagogical relevance of joyful, meaningful, and student-centered classroom learning.

LITERATURE REVIEW

Deep Learning is commonly associated with students' ability to understand concepts, connect ideas, and apply knowledge in broader and new contexts. Biggs and Moore (1993) explained learning through the 3P model, namely presage, process, and product. In this model, students' initial characteristics, the learning process, and learning outcomes are interrelated. Deep Learning occurs when students are intrinsically motivated to understand meaning, not merely to complete tasks or memorize information.

Hattie and Donoghue (2016) emphasized that effective learning strategies require students to move from surface acquisition toward deeper understanding and transfer. Similarly, Kolb's experiential learning theory explains that knowledge is constructed through direct experience, reflection, conceptualization, and experimentation (Kolb, 1984). These perspectives support a classroom design in which students actively explore concepts, discuss ideas, and connect learning materials with real-life experience.

Joyful Learning refers to a learning strategy that creates a pleasant, safe, active, and emotionally positive learning atmosphere. In the thesis, Joyful Learning is described as a strategy that reduces boredom, encourages active participation, and enables students to ask questions, express ideas, and respond to peers. Teachers are expected to create varied learning experiences through media, classroom arrangement, group work, games, discussion, and meaningful tasks.

Learning motivation is the internal and external drive that encourages students to participate in learning activities, maintain attention, complete tasks, and pursue learning goals. In educational psychology, motivation is linked with enthusiasm, persistence, curiosity, and willingness to achieve learning targets (Sardiman, 2012; Kompri, 2016). A joyful learning atmosphere may strengthen motivation because students feel safer, more valued, and more involved in classroom processes.

Learning interest refers to students' tendency to feel attracted to a subject, pay attention to it, participate in learning activities, and show enjoyment in the learning process. Slameto (2015) explains that interest is related to students' preference and attention toward learning objects. In the context of IPAS, students' interest can be stimulated through concrete examples, media use, collaborative activities, and problem-solving experiences that make the subject more meaningful.

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METHOD

This study used a quantitative approach. The research was conducted at SD Inpres Sanging-Sanging, Pattallassang District, Gowa Regency, South Sulawesi, Indonesia. The population consisted of all fifth-grade students at the school, totaling 48 students. Because the population was relatively small, the study used total sampling, so all 48 students were included as respondents.

The study involved three main variables. Joyful Learning was treated as the independent variable (X), while learning motivation (Y1) and learning interest (Y2) were treated as dependent variables. Data were collected through questionnaires and classroom observation. The questionnaire used a Likert scale, while the observation sheet was used to describe the implementation of Joyful Learning in classroom practice.

Data analysis was conducted using SPSS 26. The analysis included descriptive statistics, instrument validity testing using item-total correlation, reliability testing using Cronbach's alpha, normality testing using the One-Sample Kolmogorov-Smirnov test, and regression analysis to examine the relationship between Joyful Learning and the dependent variables. The significance level was set at 0.05.

RESULTS

The implementation of Joyful Learning was evaluated through classroom observation. The observation covered student involvement, teacher use of media and teaching methods, classroom atmosphere, learning innovation, and students' problem-solving activities. The general implementation of Joyful Learning was categorized as good. Students were actively involved in several learning activities, teachers used varied media and methods, and the classroom atmosphere was arranged to support enjoyable learning. However, students' ability to solve problems independently was still categorized as sufficient, indicating that teachers still need to strengthen problem-based learning facilitation.

Table 1. Summary of Joyful Learning Implementation

Observed Aspect	Result Summary	Category
Student involvement	Students paid attention, asked questions, and participated in group tasks.	Good
Media and methods	Teachers used electronic media, images, videos, questioning, assignments, and group activities.	Very good

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Classroom atmosphere	The classroom was arranged with motivational materials and flexible seating.	Good
Learning innovation	Learning activities were designed to be student-centered and enjoyable.	Good
Problem solving	Students still required teacher assistance in identifying solutions.	Sufficient

The validity test showed that all questionnaire items were valid because their item-total correlation values exceeded the r-table value of 0.284. The reliability test showed that all variables were reliable because their Cronbach's alpha values exceeded 0.60. The normality test also indicated that all variables were normally distributed, with significance values of 0.184 for Joyful Learning, 0.200 for learning motivation, and 0.200 for learning interest.

Table 2. Validity, Reliability, and Normality Summary

Variable	Item-Total Correlation Range	Cronbach's Alpha	K-S Sig.	Interpretation
Joyful Learning (X)	0.747-0.791	0.777	0.184	Valid, reliable, normal
Learning Motivation (Y1)	0.666-0.870	0.899	0.200	Valid, reliable, normal
Learning Interest (Y2)	0.338-0.874	0.866	0.200	Valid, reliable, normal

The regression output showed that the relationship between Joyful Learning and learning motivation had a positive direction. However, the effect did not reach statistical significance at the 0.05 level. The same pattern appeared in the relationship between Joyful Learning and learning interest. The coefficient was positive, but the statistical effect was not significant. These results are presented in Table 3.

Table 3. Regression Results of Joyful Learning on Learning Motivation and Learning Interest

Dependent Variable	B	Beta	t	Sig.	R	R Square	Interpretation
Learning Motivation (Y1)	0.395	0.267	1.875	0.067	0.267	0.071	Positive, not significant

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Learning Interest (Y2)	0.062	0.057	0.389	0.699	0.057	0.003	Positive, not significant

DISCUSSION

The findings show that Joyful Learning was implemented in a generally good category at SD Inpres Sanging-Sanging. This result indicates that the teacher had attempted to build an enjoyable classroom environment by using media, varying learning methods, arranging the classroom atmosphere, and encouraging group learning. The use of images, videos, games, and group-based activities helped students participate more actively and reduced the monotony of teacher-centered instruction.

From a pedagogical perspective, the implementation of Joyful Learning is relevant to Deep Learning because both approaches emphasize active engagement, meaningful experience, and positive emotional involvement. Deep Learning requires students to understand, apply, and reflect on learning materials, while Joyful Learning provides the emotional climate that may support those processes. A pleasant and supportive classroom atmosphere can make students more willing to ask questions, share ideas, and engage with IPAS materials.

Nevertheless, the regression results indicate that the positive relationship between Joyful Learning and the two outcome variables did not reach statistical significance. For learning motivation, Joyful Learning explained 7.1 percent of the variance. For learning interest, it explained only 0.3 percent of the variance. These values suggest that motivation and interest are likely influenced by many additional factors, such as students' prior achievement, family support, teacher communication style, peer interaction, learning resources, classroom discipline, and students' personal learning habits.

The non-significant statistical result does not automatically mean that Joyful Learning has no pedagogical value. Instead, it suggests that implementation quality, duration, measurement design, and classroom consistency may affect whether Joyful Learning produces measurable statistical impact. The observation results showed that students' problem-solving independence remained only sufficient. This condition may limit the depth of learning because joyful activities need to be connected with structured inquiry, reflective questioning, and meaningful tasks, not merely with pleasant classroom activities.

Therefore, the main implication of this study is that Joyful Learning should be strengthened through systematic instructional design. Teachers should connect enjoyable learning activities with clear learning objectives, problem-solving tasks, student reflection, formative assessment,

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and opportunities for students to explain their reasoning. When joyful experiences are integrated with meaningful and mindful learning processes, the approach may contribute more strongly to students' motivation, interest, and conceptual understanding in IPAS.

CONCLUSION

The implementation of Joyful Learning based on the Deep Learning approach in fifth-grade IPAS learning at SD Inpres Sanging-Sanging was generally categorized as good. Teachers used varied methods and media, created an enjoyable classroom atmosphere, and encouraged student participation. However, students' problem-solving independence still required pedagogical improvement.

The instruments used in this study were valid and reliable, and the data met the normality assumption. Regression analysis showed that Joyful Learning had a positive but statistically non-significant effect on learning motivation and learning interest. These results indicate that Joyful Learning has pedagogical relevance, but its measurable statistical contribution in this sample was limited.

The study recommends that teachers implement Joyful Learning not only as a pleasant classroom strategy but also as a structured Deep Learning practice. Learning activities should include inquiry, problem solving, reflection, collaborative discussion, and contextual IPAS tasks. School leaders are also encouraged to support teacher training and classroom innovation so that joyful, meaningful, and mindful learning can be implemented more consistently.

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