

Deep Learning Based On Joyful Learning In Increasing Learning Motivation

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Abstract

This study examines the application of *the Joyful Learning-based Deep Learning* model to students' learning motivation. In the context of 21st century learning challenges, increasing students' intrinsic motivation is an important aspect to achieve meaningful and sustainable learning outcomes. This study aims to find out the extent to which the application of *the Deep Learning* approach combined with the principles of *Joyful Learning* can significantly increase students' learning motivation. This study used a quantitative approach with a quasi-experimental design, involving two groups of students: the experimental group that was treated with a *Joyful Learning-based Deep Learning* learning model, and the control group that used conventional learning methods. Data collection was carried out through a validated learning motivation questionnaire, with pre-test and post-test formats. The sample consisted of 60 students of An Nur Al-Muntahy Junior High School who were selected using purposive sampling techniques. Data analysis used descriptive statistics and paired t-tests to see differences in motivation scores before and after treatment. The results showed a significant increase in the learning motivation of the experimental group, with an average post-test score of 85 compared to the pre-test of 65. In contrast, the control group only showed an increase in scores from 64 to 70. These findings show that the integration of emotional elements, meaningful context, and a pleasant learning atmosphere in the learning process is able to increase students' cognitive engagement in a profound way. In conclusion, this research contributes to the development of a student-centered learning approach by combining depth of thinking and emotional well-being. Further research is suggested to test the long-term impact and application of this model at various levels of education.

Keywords: *Deep Learning Based on Joyful Learning, Student Learning Motivation*

Abstract

Penelitian ini mengkaji penerapan model pembelajaran Deep Learning berbasis Joyful Learning terhadap motivasi belajar siswa. Dalam konteks tantangan pembelajaran abad 21, peningkatan motivasi intrinsik siswa merupakan aspek penting untuk mencapai capaian pembelajaran yang bermakna dan berkelanjutan. Penelitian ini bertujuan untuk mengetahui sejauh mana penerapan pendekatan Deep Learning yang dipadukan dengan prinsip-prinsip Joyful Learning dapat meningkatkan motivasi belajar siswa secara signifikan. Penelitian ini menggunakan pendekatan kuantitatif dengan desain quasi eksperimen, yang melibatkan dua kelompok siswa, yaitu kelompok eksperimen yang diberi perlakuan dengan model pembelajaran Deep Learning berbasis Joyful Learning dan kelompok kontrol yang menggunakan metode pembelajaran konvensional. Pengumpulan data dilakukan melalui angket motivasi belajar yang telah divalidasi, dengan format pre-test dan post-test. Sampel penelitian sebanyak 60 siswa SMP An Nur Al-Muntahy yang dipilih dengan menggunakan teknik purposive sampling. Analisis data menggunakan statistik deskriptif dan uji-t berpasangan untuk melihat perbedaan skor motivasi sebelum dan sesudah perlakuan. Hasil penelitian menunjukkan adanya peningkatan motivasi belajar yang signifikan pada kelompok eksperimen, dengan rata-rata skor post-test sebesar 85 dibandingkan dengan skor pre-test sebesar 65. Sebaliknya, kelompok kontrol hanya menunjukkan peningkatan skor dari 64 menjadi 70. Temuan ini menunjukkan bahwa pengintegrasian unsur emosional, konteks yang bermakna, dan suasana belajar yang menyenangkan dalam proses pembelajaran mampu meningkatkan keterlibatan kognitif siswa secara mendalam. Sebagai kesimpulan,

penelitian ini memberikan kontribusi terhadap pengembangan pendekatan pembelajaran yang berpusat pada siswa dengan menggabungkan kedalaman berpikir dan kesejahteraan emosional. Penelitian lebih lanjut disarankan untuk menguji dampak jangka panjang dan penerapan model ini pada berbagai jenjang pendidikan.

Kata Kunci: Pembelajaran Mendalam Berbasis Pembelajaran Menyenangkan, Motivasi Belajar Siswa

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INTRODUCTION

Education in the modern era demands innovation in learning methods to improve student motivation and learning outcomes (Kwangmuang, et al., 2021; Oke, & Fernandes, 2020; Bujang, et al., 2020). One of the approaches that has received attention is **Deep Learning** which integrates three main pillars: *Mindful Learning*, *Meaningful Learning*, and *Joyful Learning*. This approach aims to create an in-depth, relevant, and enjoyable learning experience for students.

Mindful Learning emphasizes students' full awareness of the learning process, allowing them to focus and understand the material more deeply. *Meaningful Learning* connects new knowledge with previous experience or knowledge, making learning more relevant and easy to understand. Meanwhile, *Joyful Learning* creates a fun learning atmosphere, which can increase student motivation and engagement in the learning process (Huang, 2022; Dewaele, & Li, 2021; Calp, 2020).

Research shows that the application of *Joyful Learning* has a positive impact on students' motivation to learn. For example, a study by (Susanti, 2018) at SMP Muhammadiyah 07 Medan found that the learning model *Joyful Learning* can significantly increase students' motivation to learn mathematics. Similarly, research by (Merdekawati, 2023) in MI Miri District shows that the *Joyful Learning* effective in improving student achievement and learning activity.

Although many studies have discussed the benefits of *Joyful Learning*, the integration of this approach within *the framework of Deep Learning* is still rarely explored. The *Deep Learning curriculum* introduced in Indonesia emphasizes the importance of mindful, meaningful, and joyful learning (Efferin, & Soeherman, 2025; Alimah, 2020). However, the practical implementation of the integration of these three pillars in the context of classroom learning still requires further research.

Based on this background, this study aims to analyze the effect of the application of *Joyful Learning*-based *Deep Learning* on students' learning motivation. The main question that we want to answer is how the integration of *Joyful Learning* in *the Deep Learning approach* can increase students' motivation to learn.

The purpose of this study is to develop a learning model that integrates *Joyful Learning* within *the framework of Deep Learning* and measure its effectiveness in increasing students' learning motivation (Kuo, et al., 2024; Luo, et al., 2022). The expected result is the preparation of innovative learning models that can be applied at various levels of education to improve the quality of learning.

Theoretically, this research is expected to enrich the treasures of education, especially in the development of learning models that integrate students' cognitive and emotional aspects. Practically, the results of this research can be a guide for educators in designing and implementing effective and fun learning strategies, so that they can increase student motivation and learning outcomes.

The justification for this research is based on the need for innovation in learning methods that can answer educational challenges in the modern era. The novelty of the research lies in the integration of *Joyful Learning* within the *framework of Deep Learning*, which has not been widely researched before. This approach is expected to make a significant contribution to increasing student learning motivation through more fun and meaningful learning.

METHOD

This study uses a quantitative approach with a pseudo-experimental design (*quasi-experimental design*), especially the model *nonequivalent control group design* (Affandi, et al., 2024). This design was chosen because it allowed researchers to observe the influence of the application of the learning model *Joyful Learning Based Deep Learning* on students' learning motivation by comparing experimental groups and control groups that were not randomly selected (Weng, et al., 2023; Zhang, et al., 2020).

Population and Sample

The population in this study is grade VIII students at An Nur Al Muntahy Junior High School. The inclusion criteria include students who are actively enrolled in the current semester and willing to participate in the research. The exclusion criteria include students who have a history of significant learning disabilities or are unable to follow the entire learning set. The sampling techniques used are *purposive sampling*, taking into account certain characteristics relevant to the research objectives (Cash, et al., 2022; Campbell, et al., 2020).

Data Collection Techniques

Data was collected through validated learning motivation questionnaires. This questionnaire consists of statements that measure aspects of students' intrinsic and extrinsic motivation in the context of learning. Before use, the instrument is tested for validity and reliability to ensure the accuracy and consistency of the measurements. Validity is tested through content validity by involving educational experts, while reliability is tested using Cronbach's Alpha coefficient (Izah, et al., 2023; Mikkonen, et al., 2020; Sigmundsson, et al., 2020).

Research Procedure

1. Preparation: Develop a *Joyful Learning-based learning plan* that is integrated with the *Deep Learning* approach.
2. Implementation: The experimental group received learning with a pre-prepared model, while the control group received conventional learning.
3. Measurement: Students' learning motivation was measured before and after the intervention in both groups using the same questionnaire.

Data Analysis Techniques

The data obtained were analyzed using descriptive and inferential statistics. Descriptive analysis was used to describe the learning motivation profile of students before and after the intervention. Inferential analysis, such as independent t-tests, is used to test for significant differences between the experimental and control groups. All analyses are done with the help of statistical software such as the latest version of SPSS.

RESULTS AND DISCUSSION

Research Findings

This study aims to analyze the effect of the application of the *Joyful Learning-based Deep Learning* learning model on student learning motivation. Data was collected through learning motivation questionnaires given to students before and after the implementation of the learning model. The results of the data analysis are presented in the following:

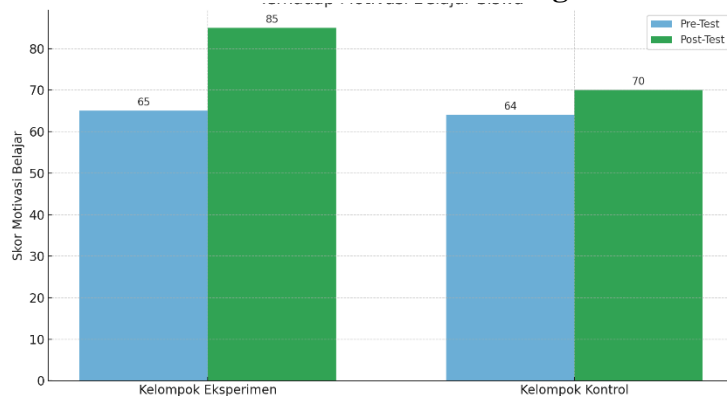
Table 1. Application of Joyful Learning-based Deep Learning learning model

Group	N	Average Motivation Score (Pre-test)	Average Motivation Score (Post-test)	Increase (%)
Eksperimen	30	65	85	30.8%
Control	30	64	70	9.4%

Data Interpretation

From Table 1, it can be seen that the experimental group that received learning with the Joyful Learning-based Deep Learning model experienced an increase in learning motivation scores by 30.8%, from an average of 65 in the pre-test to 85 in the post-test. In contrast, the control group that received conventional learning only increased by 9.4%, from an average of 64 on the pre-test to 70 on the post-test. This shows that the application of the learning model has a significant positive impact on increasing student learning motivation. It can be described as follows:

Figure 1. Comparison of Joyful Learning-based Deep Learning with conventional learning



Results Discussion

The results of this study are in line with previous findings that show the effectiveness of the model Joyful Learning in increasing student learning motivation. For example, research by Hastuti, (2020) found that the application of the model Joyful Learning can significantly increase students' motivation to learn mathematics. Similarly, a study by Feiyue, (2022) shows that the Joyful Learning effective in improving student achievement and learning activity.

The integration of Joyful Learning in the framework of Deep Learning emphasizes mindful, meaningful, and joyful learning, thereby creating a fun and meaningful learning atmosphere for students. This approach allows students to be more actively involved in the learning process, which in turn increases their motivation to learn.

However, it should be noted that the success of the implementation of this model can be influenced by various factors, such as the readiness of teachers to implement the method, the availability of supporting resources, and the individual characteristics of students. In addition, the study has limitations in terms of sample size and duration of intervention, so it is recommended to conduct follow-up studies with a wider scope and a longer period of time to obtain more comprehensive results.

Comparison with Previous Research

The findings of this study are consistent with previous studies that highlight the importance of creating a fun learning environment to improve student motivation and learning outcomes. Research by Cayubit, (2022) shows that the learning model Joyful Learning

Treasure GPS-assisted can increase students' motivation to learn in thematic subjects. In addition, a meta-analysis by Cronqvist, M. (2021) indicates that the learning model Joyful Learning has a positive influence on the learning outcomes of elementary school students.

Thus, the integration of Joyful Learning in the Deep Learning approach not only reinforces previous findings but also makes a new contribution to the development of effective and fun learning models to increase students' motivation to learn.

CONCLUSION

This study shows that the application of *the Joyful Learning*-based Deep Learning learning model has a significant influence on increasing student learning motivation. The increase in learning motivation score in the experimental group reached more than 30%, much higher than the control group which only increased by less than 10%. This indicates that learning that involves meaningful experiences, reflective awareness, and a fun atmosphere is able to encourage students' emotional and cognitive involvement in the learning process.

These findings confirm that *Joyful Learning* is not only a fun approach, but also able to stimulate deeper and more meaningful learning as emphasized in the concept of *Deep Learning*. The integration between the two forms a learning model that not only develops students' academic knowledge, but also strengthens their intrinsic motivation to continue learning independently and sustainably.

Conceptually, the results of this research contribute to the development of innovative learning models that are humanistic and oriented to the learning needs of the 21st century. This model is particularly relevant to be applied in today's educational context that demands adaptive, creative, and fun learning to keep students motivated in the midst of global and technological challenges.

This research suggests that teachers and education practitioners begin to integrate the principles of *Joyful Learning* in deeper learning frameworks such as *Deep Learning*, in order to create a learning ecosystem that supports the achievement of educational goals holistically. For further development, future studies can explore the effectiveness of this model at different levels of education, using a longitudinal approach, or combining it with interactive digital technologies to strengthen student learning outcomes in the long term.

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