



## Evaluation of Deep Learning Curriculum Management in High School: Case Study in SMPT Baiturrahman Ciparay, Bandung Regency

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### ABSTRACT

This study is entitled Evaluation of Deep Learning Curriculum Management in Secondary Schools: Case Study at SMPT Baiturrahman Ciparay, Bandung Regency. The main objective of this study is to evaluate the implementation of deep learning principles in curriculum management as an effort to improve the quality of learning at the secondary school level. The deep learning approach prioritizes meaningful, conscious, and joyful learning (meaningful, mindful, joyful learning) in order to form active, reflective, and critical thinking students. By using a qualitative approach and case study method, data were obtained through interviews, observations, and document analysis. The results of the study indicate that SMPT Baiturrahman has begun to implement deep learning elements in its learning practices, although it is still limited to several subjects. The challenges faced include lack of teacher training, limited facilities, and the need for a change in teaching paradigm. However, this approach has proven to be able to significantly increase student engagement and understanding. This study recommends increasing teacher capacity, developing a contextual curriculum, and supporting facilities and policies from school management to optimize deep learning-based curriculum management

## **INTRODUCTION**

Education in Indonesia is currently in a significant transformation phase, triggered by the dynamics of globalization and rapid technological advances. The demand to produce human resources who are adaptive, creative, and have 21st century skills is becoming increasingly urgent. This drives a paradigm shift in education from a traditional approach to a more innovative learning model that is relevant to the needs of the times.

One approach that is starting to be adopted in the Indonesian education system is deep learning. This approach emphasizes deep understanding, active student involvement, and application of knowledge in real contexts. Thus, deep learning does not only focus on mastering the material, but also on developing critical, collaborative, and creative thinking skills.

The implementation of deep learning in education is based on three main pillars: mindful learning, meaningful learning, and joyful learning. Mindful learning invites students to learn with full awareness, meaningful learning ensures that learning has meaning and relevance for students, while joyful learning creates a fun and motivating learning atmosphere.

The success of implementing deep learning is highly dependent on effective curriculum management. Curriculum management must be able to design, implement, and evaluate learning programs that are in line with the principles of deep learning. This includes setting clear learning objectives, selecting appropriate methods and media, and assessments that support the holistic development of student competencies.

Although the deep learning approach offers various advantages, its implementation at the secondary school level faces a number of challenges. Among them are limited resources, lack of training for teachers, and resistance to changes in learning methods. In addition, adapting the curriculum to suit the local context is also an obstacle.

The implementation of deep learning has great potential in improving the quality of student learning. Students become more active in the learning process, are able to relate material to real life, and show improvements in critical thinking skills. In addition, this approach also encourages students to become independent and responsible lifelong learners.

As an effort to evaluate the implementation of deep learning, this study focused on SMPT Baiturrahman Ciparay, Bandung Regency. This school was chosen because it has begun to adopt deep learning principles in its learning process. Through this case study, it is hoped that a more concrete picture can be obtained regarding the practice of deep learning at the secondary school level.

This study uses a qualitative approach with critical literature study methods and field observations. Data were collected through analysis of curriculum documents, interviews with teachers and students, and observations of the learning process in the classroom. Data analysis was conducted descriptively to identify the principles, challenges, and impacts of implementing deep learning at SMPT Baiturrahman Ciparay.

The results of the study indicate that the implementation of deep learning at SMPT Baiturrahman Ciparay has shown progress, although there are still some obstacles. Teachers have begun to apply more interactive and contextual learning methods, but still need further training to optimize this approach. Students show an increase in engagement and understanding of the material, but adaptation to new methods requires time and consistent support.

The implementation of deep learning at SMPT Baiturrahman Ciparay shows potential in improving the quality of learning. However, the full success of this approach requires support from all parties, including school management, teachers, students, and other stakeholders. Recommendations that can be given include increasing training for teachers, providing adequate resources, and developing a flexible and contextual curriculum.

## **LITERATURE REVIEW**

### ***Principles of Deep Learning Curriculum Management***

Curriculum management based on deep learning focuses on planning, implementing, and evaluating in-depth learning, not just memorization. This approach emphasizes three main pillars known by the acronym.

#### ***1. Mindful Learning***

Mindful learning invites students to learn with full awareness. In this context, students are encouraged to:

- Be aware of their thinking process during learning.
- Identify strengths and weaknesses in understanding the material.
- Reflect on learning experiences to improve understanding and skills.

This principle helps students become active learners and aware of their own learning process.

#### ***2. Meaningful Learning***

Meaningful learning emphasizes learning that is meaningful and relevant to students. Learning is considered meaningful if:

- The material being studied can be connected to previous experiences and knowledge.
- Students can see the connection between the material and everyday life.
- Learning encourages students to think critically and creatively in solving problems.

This principle aims to increase student motivation and involvement in the learning process.

#### ***3. Joyful Learning***

Joyful learning creates a fun learning atmosphere and motivates students to continue learning. This can be achieved through:

- Using varied and interesting learning methods.
- Giving awards and positive feedback.
- Creating a supportive and inclusive learning environment.

This principle aims to reduce stress and increase student satisfaction in the learning process.

The integration of these three principles in curriculum management is expected to create a holistic and effective learning experience for students.

### ***Evaluation in Deep Learning Curriculum Management***

Evaluation in the context of deep learning does not only focus on the final results, but also on the learning process itself. This evaluation aims to:

- Monitor the development of student understanding and skills continuously.
- Provide constructive feedback for improving the learning process.
- Adjust learning strategies according to student needs and characteristics.

Evaluation in deep learning includes:

#### ***1. Formative Assessment***

Conducted during the learning process to provide feedback that can be used for improvement.

#### ***2. Summative Assessment***

Conducted at the end of learning to assess the achievement of overall learning outcomes.

This assessment should cover the cognitive, affective, and psychomotor aspects of students. In addition, the evaluation must be aligned with 21st century competencies, such as creativity, communication, and collaboration.

In its implementation, collaborative project-based evaluation can help measure students' deep understanding of the material being studied. For example, in the "School Waste Management" project, students' success in finding innovative solutions to recycling waste shows their ability to understand the concept of sustainability.

Thus, evaluation in deep learning curriculum management functions as a tool to ensure that deep learning objectives are achieved and provide direction for continuous improvement in the learning process.

### ***Previous Research***

The deep learning approach in education emphasizes meaningful, deep, and enjoyable learning, with strategies such as Project-Based Learning proven effective in increasing student engagement and understanding critically and contextually. A number of previous studies, such as those conducted by Putri et al. (2022), Adnyana (2023), and Pane et al. (2025), shows that the implementation of deep learning at the junior high and senior high school levels can increase students' learning motivation, active participation, and critical thinking skills, especially in the context of the Merdeka curriculum. However, challenges such as limited facilities and infrastructure, teacher readiness, and evaluation that does not fully measure students' deep skills still need to be overcome. Therefore, these studies recommend the importance of policy support, teacher training, and curriculum flexibility for the successful implementation of deep learning. Research conducted by Abdul Raup et al. (2022) highlights the rapid development of artificial intelligence, especially deep learning, which is now applied in various fields, including education. This technology offers efficiency for educational institutions, reduces operational costs, and increases responsiveness to learning needs. Meanwhile, Fierna (2022) in her research on curriculum evaluation at the Al-Furqon Modern Islamic Boarding School emphasized the need for curriculum management evaluation to ensure the suitability between implementation and educational goals, especially by integrating Islamic values and the contextual needs of the institution. These

findings illustrate the urgency of adapting curriculum strategies to technological developments, including the implementation of deep learning, to improve the quality of education at various levels.

Furthermore, research by Nurfaizah and Rusman (2022) emphasizes the importance of implementing deep learning in Islamic education to not only master the material cognitively, but also train students to think critically and reflectively towards Islamic values. A study by Akmal, Maelasari, and Lusiana (2025) through the Systematic Literature Review found that deep learning plays an important role in the integration of knowledge, social engagement, and the application of technology in personal and contextual learning. This study also underlines the importance of meaningful learning-based curriculum management to create an active and collaborative learning culture in secondary schools, which is relevant to the needs of the 21st century.

In closing, several other studies such as by Kovač et al. (2023) and Syahputra and Komariah (2022) highlight the challenges in implementing deep learning, including the ambiguity of definition and the lack of a strong theoretical foundation, as well as the role of the principal in curriculum management that is responsive to developments in the times. These findings are an important basis for evaluating the implementation of deep learning curriculum management at SMPT Baiturrahman Ciparay, with a focus on value-based and character-based education.

## **METHODOLOGY**

This study adopted a qualitative approach with a critical literature study design and field observation to explore the implementation of deep learning-based curriculum management at SMPT Baiturrahman Ciparay, Bandung Regency. Critical literature study was used to analyze related literature, such as official documents of the Ministry of Education and scientific journals, in order to understand the relevant context and theories. Field observations were conducted to directly observe the learning process and curriculum implementation in the classroom.

The main data sources include official documents, scientific journals, field reports from teachers, and the results of observations and informal interviews with subject teachers. Data collection techniques used include literature studies to collect relevant literature, observations to observe the learning process, and interviews to explore teachers' experiences and perceptions regarding the implementation of deep learning. The data obtained were analyzed descriptively and analytically to describe the phenomena that occurred and identify the principles, challenges, and impacts of the implementation of deep learning-based curriculum management.

To ensure the validity of the data, this study used triangulation and member checking techniques. Triangulation is carried out by comparing data from various sources and methods to obtain a more comprehensive and valid understanding of the phenomenon being studied. Member checking is done by asking for confirmation from informants (teachers) regarding initial findings to

ensure the accuracy and credibility of the data. These techniques help increase validity and reduce data bias in qualitative research.

## **RESULTS AND DISCUSSION**

### ***Implementation of Deep Learning Curriculum Management Principles***

At SMPT Baiturrahman Ciparay, the implementation of deep learning-based curriculum management principles has begun to be seen in daily learning practices. Teachers encourage students to think critically, relate subject matter to personal experiences, and actively participate in class discussions. This approach is in line with the concept of mindful learning, where students are encouraged to be fully aware of their learning process and be reflective.

In addition, the meaningful learning approach is applied by linking subject matter to the context of students' real lives. Teachers strive to make learning relevant and meaningful, so that students can understand the importance of the material being studied in everyday life. Joyful learning is also attempted through fun and motivating learning activities, such as the use of interactive media and varied learning methods.

However, the application of these principles is still limited to several subjects and is not evenly distributed across the curriculum. This indicates the need for further efforts to ensure that all teachers understand and are able to integrate deep learning principles into their learning. Continuous training and mentoring are key to achieving this goal.

### ***Challenges in Implementing Curriculum Management***

The implementation of deep learning-based curriculum management at SMPT Baiturrahman Ciparay faces several significant challenges. One of the main challenges is the limited training for teachers in designing and implementing deep learning-based learning effectively. Many teachers do not fully understand the concepts and strategies needed to implement this approach in their classrooms.

Limited resources are also an obstacle in implementing this curriculum. The facilities and technology available in schools are still inadequate to support deep learning-based learning optimally. This includes a lack of hardware, limited internet access, and a lack of appropriate digital teaching materials.

In addition, the change in the role of teachers from conveyors of information to facilitators in the deep learning approach requires a paradigm shift that has not been fully accepted by all teachers. Some teachers are still comfortable with traditional teaching methods and are reluctant to adopt new approaches that require active student involvement in the learning process.

### ***Impact on Student Learning***

The implementation of the deep learning approach at SMPT Baiturrahman Ciparay has shown a positive impact on student learning. Students become more active in the learning process, are able to relate material to real life, and show improvements in critical thinking skills. They are also more involved in class discussions and show a high level of curiosity about the material being studied. In addition, this approach helps students develop the character qualities needed to adapt to an ever-changing environment. Students become more proactive, have initiative, and show perseverance in completing challenging tasks. They

also learn to work together in teams, appreciate the contributions of teammates, and develop empathy.

However, it still takes time and effort to fully integrate this approach into the curriculum. Support from all parties, including school management, teachers, students, and parents, is essential to ensure the successful implementation of deep learning-based curriculum management at SMPT Baiturrahman Ciparay. Continuous evaluation and improvement are also needed to adapt this approach to the needs and local context of the school.

## **CONCLUSIONS AND RECOMMENDATIONS**

Based on the results of the study on the implementation of deep learning-based curriculum management at SMPT Baiturrahman Ciparay, it can be concluded that the application of deep learning principles has had a positive impact on the learning process. Teachers have begun to integrate mindful, meaningful, and joyful learning approaches into teaching and learning activities, which encourage students to be more active, critical, and reflective. However, this application is still limited to several subjects and is not evenly distributed throughout the curriculum.

However, the implementation of this approach faces various challenges. Limited training for teachers, lack of resources and supporting facilities, and resistance to changing the role of teachers to become learning facilitators are the main obstacles. The readiness of technological infrastructure in schools is also a challenge, because not all educational institutions have adequate access to sophisticated hardware and software that supports technology-based learning.

Nevertheless, the deep learning approach shows a positive impact on increasing student engagement and self-reflection. Students become more active in the learning process, are able to relate material to real life, and show improvements in critical thinking skills. However, it still takes time and effort to fully integrate this approach into the curriculum. Support from all parties, including school management, teachers, students, and parents, is essential to ensure the successful implementation of deep learning-based curriculum management at SMPT Baiturrahman Ciparay. Continuous evaluation and improvement are also needed to adapt this approach to the needs and local context of the school.

## **FURTHER STUDY**

Based on the results of research on the implementation of deep learning-based curriculum management at SMPT Baiturrahman Ciparay, here are some strategic recommendations to improve the effectiveness and sustainability of this approach:

First, it is necessary to organize a continuous training program for teachers to deepen their understanding and skills in applying deep learning principles. This training can include monthly workshops, individual mentoring, and curriculum implementation simulations, which are designed to improve teachers' technical and emotional competencies in facing the challenges of a deep

learning-based curriculum. This approach is in line with efforts to improve the quality of education that emphasize more flexible and enjoyable learning.

Second, it is important to improve infrastructure and resource support in schools. This includes the provision of adequate facilities and technology to optimally support deep learning-based learning. Limited facilities and technology in schools can hinder the effective implementation of this approach.

Third, there needs to be a paradigm shift in the role of teachers from conveyors of information to facilitators of learning. This change requires ongoing support and coaching so that all teachers can accept and adopt new approaches that require active student involvement in the learning process. The role of teachers as facilitators in the deep learning approach requires a paradigm shift that has not been fully accepted by all teachers. By implementing these recommendations, it is hoped that the implementation of deep learning-based curriculum management at SMPT Baiturrahman Ciparay can run more effectively and provide a sustainable positive impact on the quality of learning and student development.

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