

Research Article

Deep Learning in the Perspective of Educational Philosophy: Between Existence, Ethics, and Epistemology

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Abstract: Deep learning has become a key discourse in educational reform across various levels, from elementary schools to higher education institutions. This article aims to examine deep learning from the perspective of philosophy of education, focusing on three central dimensions: existence, ethics, and epistemology. This research employs a qualitative approach using philosophical and phenomenological analysis of data from the socialization programs of deep learning currently being implemented in several educational institutions in Indonesia. The findings reveal that deep learning represents an educational approach that is mindful (conscious and reflective), meaningful (contextual and purposeful), and joyful (relational and emotionally engaging). These three characteristics are rooted in a strong philosophical foundation, which can serve as a basis for developing more humanistic and transformative curricula and educational practices. Additionally, deep learning encourages learners to develop critical consciousness and cultivate their autonomy in the learning process. It also supports the creation of educational environments that prioritize empathy, collaboration, and lifelong learning.

Keywords: Deep Learning; Epistemology; Ethics; Existence; Mindful Learning.

1. Introduction

The transformation of education in Indonesia requires not only structural and curricular changes, but also a paradigm shift in how we view the nature of learning. Education plays a crucial role in shaping the quality of human resources (HR), the backbone of a nation's progress. In the era of globalization and the Fourth Industrial Revolution, rapid technological developments require every country, including Indonesia, to continuously adapt and develop its education system to create a generation that is not only academically intelligent but also capable of critical, creative, and adaptive thinking. One approach that is beginning to be widely introduced is deep learning, which emphasizes not only cognitive aspects but also the affective and existential aspects of students. Unlike traditional learning models, which tend to be detailed and memorization-oriented, deep learning emphasizes active student involvement in constructing knowledge in a reflective, meaningful, and contextual manner. This approach aligns with today's educational needs, which demand the integration of cognitive, affective, and existential aspects. Thus, the learning process not only produces knowledge but also fosters self-awareness, social responsibility, and ethical skills in students. Indonesia's human resource growth and potential are enormous, given its population of over 270 million, with a significant proportion of its productive age. However, the main challenge is how to improve the quality of education to meet the needs of the times without losing the fundamental human and philosophical values of the learning process. Education that emphasizes only the mechanical transfer of knowledge has the potential to create a generation

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that is cognitively intelligent but lacks deeper and more significant understanding, self-awareness, and ethical competence.

In this context, educational philosophy plays a crucial role in providing a theoretical foundation for in-depth learning. This situation raises the need for innovation in education that avoids being trapped in old, outdated, and static patterns. Education must develop dynamically and adaptively, in line with technological advances and the demands of modern society. Through philosophy, education is understood not merely as a means of acquiring knowledge, but also as a process of developing a holistic human being. Various experts, such as John Dewey, Paulo Freire, Jean Piaget, and existentialists like Sartre and Heidegger, emphasize that education should liberate and provide space for the development of each individual's knowledge. This perspective is relevant in establishing in-depth learning as a new paradigm for education in Indonesia.

The Indonesian government has also initiated various innovative policies and programs, such as deep learning, which aims to improve the quality of the teaching and learning process through a mindful, meaningful, and joyful approach. This effort demonstrates a commitment to building an education system that is more responsive to the needs of the 21st century. To this end, deep learning has the potential to become a key strategy for accelerating the transformation of national education, as it integrates the existential dimension (self-awareness), the ethical dimension (humanistic relational relationships), and the epistemological dimension (reflective and contextual knowledge construction).

Deep learning emphasizes not only cognitive aspects but also integrates existential, ethical, and epistemological dimensions into the educational process. This provides a crucial foundation for the younger generation to grow as individuals who are aware of their existence, capable of establishing ethical relationships, and developing knowledge contextually and critically. The three main dimensions of focus are existential (who the learners are), ethics (how the relationship between teacher and student is built), and epistemology (how knowledge is understood and constructed).

This research aims to examine these three dimensions within a deep learning framework, based on data from initial socialization and practices that have begun to be implemented at several levels of education. Deep learning is a strategic solution for developing superior human resources ready to face the challenges of an increasingly complex and high-tech world. This innovation is expected to accelerate the transformation of Indonesian education from generation to generation, maintain the relevance and sustainability of educational quality, and prevent stagnation that could hinder national progress.

2. Preliminaries or Related Work or Literature Review

Several educational experts, such as John Dewey, Paulo Freire, Jean Piaget, and others, have their own perspectives on the innovations of the deep learning process, including:

Long-Lasting Understanding

Deep learning encourages students to truly understand the material conceptually and contextually, rather than simply memorizing it. This makes the acquired knowledge more ingrained and applicable in new situations, not just for a short-term exam.

Developing Critical and Creative Skills

With an approach that emphasizes reflection, analysis, and knowledge construction, students become accustomed to critical and creative thinking. These skills are crucial in facing the challenges of an ever-changing world.

Self-Awareness and Learning Independence

Deep learning helps students become more aware of their own learning process (mindful learning), increasing independence and internal motivation to continue learning throughout life (lifelong learning).

Improved Social and Ethical Competence

Because deep learning also integrates ethical and relationship aspects, students will be better able to build healthy social relationships and act ethically, which are crucial for social life.

Positive Impact on Mental Health and Motivation

Enjoyable and meaningful learning can improve students' emotional well-being, reduce learning stress, and maintain high motivation in the long term.

Contribution to Education System Transformation

At a macro level, the implementation of deep learning can lead to a paradigm shift in education that is more humanistic and adaptive, sustainably improving the quality of the nation's human resources.

Deep learning is defined as a learning process that involves the active involvement of students in building a deep, reflective, and meaningful understanding of the learning material. Unlike surface learning, which focuses on memorization and repetition, deep learning encourages students to connect new information with prior experiences and knowledge, resulting in deeper internalization.

The Indonesian government, through programs such as Merdeka Belajar (Freedom to Learn), Kampus Mengajar (Teaching Campus), and deep learning training, has applied the principles of this theory to accelerate the effective and sustainable dissemination of educational innovations. By building strong communication, providing training support, and adapting innovations to local contexts, it is hoped that more meaningful learning approaches can be adopted by various parties in the education system.

3. Method

The research methodology used in this study is a qualitative approach with philosophical and phenomenological study methods, which aims to deeply understand the concept of deep learning from the perspective of educational philosophy and its implementation in the context of Indonesian education. This approach was chosen because the focus of the research lies in the exploration of meaning, values, and experiences related to the three main dimensions of deep learning, namely existence, ethics, and epistemology. Data were collected through a literature review of educational philosophy theories from figures such as John Dewey, Paulo Freire, Jean Piaget, Sartre, and Heidegger. Through this methodology, it is hoped that the research can provide a conceptual contribution to the development of a new paradigm of Indonesian education that is more humanistic, reflective, and contextual.

4. Results and Discussion

Existential Philosophy in Education

Philosophers such as Jean-Paul Sartre and Paulo Freire emphasized the importance of human existence as a free and authentic subject in education. In in-depth learning, students are not viewed as objects of instruction, but as subjects with the autonomy to discover meaning (Freire, 1970).

In the realm of education, the existential dimension demands that students be viewed not as passive objects simply receiving information, but as active subjects in the learning process and the search for meaning. Education should be an arena where individuals develop authentically, discover their identity, and take responsibility for their learning and existence.

However, the current state of education still faces various challenges that demonstrate the minimal application of this existential dimension. Education systems in many places, including Indonesia, tend to focus solely on cognitive aspects, with learning methods that are often mechanistic and oriented toward mastering content for exams (assessment-driven learning). This leads to students being trapped in surface learning, where they simply attempt to memorize and imitate without truly understanding or internalizing the material. This situation results in students losing the opportunity to develop deep self-awareness (mindfulness), critical reflection, and autonomy in learning. They become less connected to the personal and social meaning of their learning. Yet, in the global context and complexity of the modern world, the ability to be an authentic and conscious learner is crucial.

Furthermore, the pressure on academic standards and targets sometimes neglects the emotional and existential development of students. This situation can lead to feelings of alienation and dissatisfaction with the learning process, leading to decreased motivation, creativity, and even mental health.

Deep learning, when viewed from an existential dimension, offers a new paradigm that allows students to fully engage—consciously and reflectively—in the learning process. Through mindful learning, students are encouraged to become aware of their learning experiences, connect them to personal and social values, and actively participate in constructing knowledge. Learning is required to have outputs that are balanced with the paradigm of education that keeps pace with developments.

Thus, learning functions not merely as a transfer of information, but as a process of authentic and transformative search for meaning. The implementation of the existential dimension in education also demands a shift in the role of teachers from mere transmitters of material to facilitators who help students discover and actualize themselves. In Indonesia's rich and diverse socio-cultural context, learning that values individual existence allows for adaptation to local contexts while simultaneously developing students capable of critical thinking and ethical behavior in facing global challenges.

Existential Dimension: Authentic Learning Subjects

The existential dimension emphasizes that education is not merely an intellectual process, but also an existential experience involving human awareness, freedom, and responsibility. From an existentialist philosophical perspective, students must be viewed as authentic subjects, not simply objects receiving knowledge.

In the Indonesian context, the relevance of the existential dimension is clearly evident in the implementation of the Merdeka Belajar-Kampus Merdeka (MBKM) program. Research by the University of Bandar Lampung (2024) on student experiences in the MBKM program shows that involvement in internships, social projects, and research provides space for self-reflection and strengthens students' academic abilities. A similar finding was found in research by Indraprasta University (2024), where students perceived a shift in their role from mere recipients of knowledge to active designers of their learning experiences. These findings demonstrate that freedom to learn is not merely an abstract idea but has become a concrete practice in higher education in Indonesia.

In early immersive learning practices, students were engaged in reflective and expressive activities that emphasized the search for identity and personal meaning. This demonstrates an existential approach, positioning students as active subjects in the search for meaning in life and knowledge. Thus, the existential dimension of immersive learning emphasizes the importance of positioning students as free, conscious, and responsible individuals for their learning process. Through this approach, education not only shapes intellectual intelligence but also helps students become authentic human beings, who are able to navigate their lives meaningfully.

Relational Ethics in Education

Relational ethics in education focuses on the quality of interpersonal relationships between teachers, students, and the learning environment as a whole.

In today's educational context, relational ethics can no longer be viewed as static or traditional. Technological developments, sociocultural changes, and the demands of globalization require a dynamic and ever-evolving relational ethics. Teachers and students must be able to build effective, inclusive communication that is responsive to the needs and diversity of each individual.

The quality of this ethical relationship is a crucial foundation for creating a joyful learning environment—a place where students feel emotionally valued, heard, and morally supported. Such an environment has been shown to increase learning motivation, creativity, and a sense of social responsibility, all of which are essential for producing quality human resources. However, the biggest challenge today is how to integrate this relational ethics with relevant educational innovations. With the rapid development of educational technologies such as online learning, social media, and artificial intelligence, new challenges arise in maintaining the authenticity of human interactions and ethical values. For example, digital interactions can diminish the depth of personal relationships if not managed properly.

Therefore, innovation in relational ethics must continue, both through teacher training that emphasizes emotional intelligence and compassion, and through the development of learning models that incorporate technology without losing the human touch. Approaches such as blended learning, which combines face-to-face interaction with technology, or the application of pedagogy that places empathy and dialogue at the core of the learning process, are strategic steps. Developing adaptive relational ethics is also crucial to addressing the needs of cross-generational education. Today's young generation, often referred to as digital natives, requires a different approach to communication and motivation than previous generations. Therefore, education must adapt to these dynamics to ensure its relevance and effectiveness.

Overall, a relational ethics that continues to develop and is integrated with educational innovation will provide a strong foundation for producing human resources who are not only intellectually competent but also possess mature moral character, strong empathy, and adaptability. This is crucial for each generation to continue the nation's development with ever-improving quality.

Ethical Dimension: Humanistic Relations in Learning

Ethics in education cannot be separated from the quality of the relationships between teachers, students, and the learning environment. In deep learning, these relationships are no longer systematic and structured, but rather communicative, participatory, and based on mutual respect.

In the context of deep learning, relational ethics is a crucial factor in creating a pleasant learning environment. Students who feel valued, heard, and treated humanely will be more motivated and more open to participating in developing social responsibility. A good ethical relationship between teachers and students not only facilitates the transfer of knowledge but also builds emotional bonds that foster student self-confidence and resilience.

The implementation of education policies in Indonesia demonstrates the real relevance of this ethical dimension. In the Merdeka Belajar program in elementary and secondary schools, teachers are encouraged to act as facilitators who accompany students, not simply as instructors. Research by Fitrah (2025) conducted at a junior high school in Bima City, West Nusa Tenggara, revealed that reflection-based formative assessment not only improves students' academic understanding but also strengthens teacher-student interactions. Teachers no longer simply give grades but also provide constructive feedback, so students feel valued as individuals. These findings confirm that formative assessment can strengthen the ethical dimension of learning by creating inclusive and participatory interactions.

Furthermore, studies on the implementation of MBKM in higher education also show a shift in the relationship between lecturers and students, becoming more collaborative. Lecturers act as mentors, providing space for dialogue, guidance, and moral support when students engage in internships, research, and social projects. This interaction pattern demonstrates a shift in the role of educators from knowledge transmitters to learning facilitators, which aligns with the ethics of care principle in building humanistic relationships.

However, the biggest challenge in strengthening the ethical dimension is how to integrate relational values with technological developments in education. Digital interactions, if not managed wisely, have the potential to diminish the depth of personal relationships between teachers and students. Therefore, pedagogical innovation is needed that can combine technology with a humanistic approach, for example through a blended learning model that maintains empathy, dialogue, and caring at the core of the learning process.

Thus, the ethical dimension of in-depth learning is not merely a supporting aspect but a crucial foundation for creating sustainable and character-based education. A healthy relationship between teachers and students is a key tool in shaping a generation that is not only intellectually superior but also possesses high moral sensitivity and social empathy. Teacher-student interactions shift from instructional to dialogic, with teachers acting as facilitators who are relationally and ethically present, creating a safe space for the exploration of ideas and emotions.

Constructivist Epistemology

Epistemology is a branch of philosophy that studies the nature, sources, and limitations of knowledge. In the context of education, epistemology determines how knowledge is understood, constructed, and conveyed in the learning process.

In deep learning, constructivist epistemology is the primary foundation because it encourages students to not only memorize information but also connect new knowledge to previous experiences and real-world contexts. This process enables more meaningful learning and enhances critical and creative thinking skills.

Furthermore, constructivist epistemology emphasizes reflection as a crucial component of deep learning. Through reflection, students can review acquired knowledge, evaluate its relevance and application, and build a robust framework for thinking. This aligns with the concept of mindful learning, which integrates full awareness and attention into the learning process. However, challenges in implementing constructivist epistemology include the need for a supportive learning environment, teachers capable of facilitating constructive processes, and evaluation methods that measure not only memorization but also understanding and application of knowledge.

In the Indonesian context, the implementation of constructivist epistemology in deep learning is crucial, given the need to produce human resources who not only master scientific knowledge but are also able to adapt and innovate in the face of technological developments and complex social dynamics. By integrating constructivist epistemology, immersive learning not only creates enduring knowledge but also fosters lifelong learning skills, much needed in the modern era.

According to data from the Directorate General of Higher Education (Dikti), the 8th Batch of the Kampus Mengajar Program, which began on September 9, 2024, involved 2,907 schools in 27 provinces, encompassing elementary, junior high, and vocational high schools. Of these, 222 junior high and vocational high schools were designated as priority schools for the implementation of the Independent Curriculum (IKM). Although specific data on the percentage of immersive learning implementation at the elementary and junior high/senior high school levels is not yet available, student involvement in this program demonstrates an effort to introduce and implement a more in-depth and contextual learning approach at the elementary and secondary school levels.

At the university level, the Merdeka Belajar Kampus Merdeka (MBKM) program has been implemented through various learning activities, such as internships, student exchanges, and research. In 2023, LLDikti Region X (West Sumatra and Jambi) recorded 30 out of 117 private universities implementing Independent MBKM, with 20 universities in West Sumatra and 10 in Jambi. However, data on the specific percentage of deep learning implementation in universities is not yet available. Nevertheless, various assistance programs, such as the Digital Learning Development and Implementation Assistance Program (P3D) and the Collaborative Online Learning Assistance Program (PDK), have been implemented to support innovation in learning in higher education.

By 2025, the government, through the Ministry of Education and Culture, is targeting the implementation of deep learning in all elementary and secondary schools in Indonesia between 2028 and 2030. However, initial implementation began in the 2025/2026 academic year with intensive outreach and training for teachers and principals. For example, in July 2025, 229 teachers and principals in Kudus Regency, Central Java, participated in deep learning training. Additionally, in North Sumatra, 150 teachers from three districts/cities participated in competency improvement activities in the implementation of in-depth learning in July 2025.

Although specific data on the percentage of implementation across Indonesia is not yet available, these activities This outreach and training demonstrate the government's commitment to introducing and implementing deep learning approaches at the primary and secondary education levels. Globally, although specific data on the percentage of deep learning implementation at each level of education is not yet available, various government programs demonstrate a commitment to introducing and implementing deeper and more contextual learning approaches. The involvement of various parties, including students, lecturers, and educational institutions, is key to the successful implementation of deep learning in Indonesia.

The analysis procedure was carried out in three stages:

- a. Data reduction: Filtering relevant data related to the implementation and narrative of deep learning.
- b. Philosophical interpretation: Analyzing narratives within an existential, ethical, and epistemological framework.
- c. Synthesis of meaning: Formulating conceptual contributions to educational theory and practice.

Epistemological Dimension: Knowledge as a Constructive and Reflective Process

Epistemology in the philosophy of education relates to the nature, sources, and limits of knowledge, as well as how knowledge is constructed and validated in the learning process. In the immersive learning paradigm, knowledge is not viewed as final and absolute, but rather as the result of active interactions between students and their environment, experiences, and self-reflection.

In the context of immersive learning, constructivist epistemology is realized through reflective activities, learning by doing, and co-construction of knowledge. This process enables students not only to memorize information but also to connect new knowledge to their personal experiences and the social contexts they encounter. The implementation of the Independent Curriculum in Indonesia provides a concrete example of the application of constructivist epistemology. Studies in various schools implementing this curriculum show that project-based learning (PjBL) encourages students to construct knowledge through collaboration, exploration of real-world problems, and reflection on their work. Research by Lestari (2024) found that the implementation of PjBL in elementary schools improved students' critical thinking skills, creativity, and reflective abilities.

In higher education, the implementation of Independent Learning–Independent Campus (MBKM) also demonstrated a strengthening of the epistemological dimension. Students involved in internships, research, and social projects reported significant improvements in their reflective and problem-solving skills. Prasetyo's (2024) research at Yogyakarta State University showed that students participating in MBKM were better able to integrate theory with practice and were more reflective in evaluating their learning experiences. Similar results were also demonstrated by research at Indraprasta University (2024), which confirmed that student involvement in MBKM encouraged the development of integrative skills, both academically and practically. However, the implementation of constructivist epistemology faces several challenges, including teacher readiness to design reflective learning experiences.

Epistemological Dimension: Reflective Knowledge Construction

The epistemological dimension of in-depth learning relates to how knowledge is acquired, interpreted, and used in the learning context. This perspective emphasizes that learning is not a process of receiving information, but rather a means of knowledge construction that occurs through interactions between the individual, the social environment, and life experiences.

Jean Piaget (1950) explained that the learning process is an individual's active effort to balance their cognitive structure through the mechanisms of assimilation and accommodation. This view emphasizes that knowledge is not static but constantly evolving in accordance with new experiences encountered by learners. Lev Vygotsky (1978) complemented this view by emphasizing the role of social interaction in knowledge formation through the concept of the Zone of Proximal Development (ZPD). According to Vygotsky, students are able to reach their optimal potential when guided by teachers or more competent peers.

The Indonesian educational context demonstrates that this epistemological dimension is receiving increasing attention. For example, in the implementation of the Independent Curriculum in elementary schools, a project-based approach emphasizing collaboration, exploration, and reflection has been applied to help students understand abstract concepts in a more concrete and contextual way. Research conducted by Lestari (2024) in several elementary schools implementing the Independent Curriculum showed that the project-based learning model improves students' critical thinking skills, creativity, and reflective abilities in addressing real-life problems.

In higher education, the implementation of the Integrated Community-Based Learning (MBKM) also demonstrates a strengthening of the epistemological dimension. Students involved in internships, research, or social projects have reportedly experienced significant improvements in their reflective and problem-solving abilities. A study conducted by Prasetyo (2024) at Yogyakarta State University showed that students participating in the MBKM program were better able to integrate theory with practice and were more reflective in evaluating their learning experiences. This demonstrates that the epistemology of learning is not only related to the accumulation of knowledge but also to the process of critical reflection that transforms students' ways of thinking and acting.

Thus, the epistemological dimension of in-depth learning demonstrates that knowledge is not final, but rather the result of a continuously evolving reflective construction. Education oriented toward this dimension can shape students who are critical, reflective, and adaptive to change, thus preparing them to face the complexities of modern life in a more meaningful way.

5. Conclusion

Deep learning is an educational approach that emphasizes active student involvement in constructing understanding in a reflective, meaningful, and contextual manner. This approach integrates three main dimensions: existential, ethical, and epistemological. The existential dimension positions students as authentic subjects who are self-aware and free to discover the meaning of learning. The ethical dimension emphasizes the humanistic and communicative relationship between teachers, students, and the learning environment, creating an inclusive, empathetic, and participatory learning environment. The epistemological dimension encourages the active construction of knowledge through reflection, collaboration, and the application of real-world experiences.

The implementation of deep learning in Indonesia, through the Independent Curriculum and the MBKM program, has demonstrated improvements in students' critical thinking, creativity, reflection, and problem-solving abilities. This approach demonstrates that education not only transfers knowledge but also shapes individuals who are self-aware, ethical, and adaptive, and able to integrate theory with practice. Thus, deep learning is an effective educational strategy for producing superior human resources ready to face global challenges in a meaningful and humanistic manner.

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