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STRENGTHENING MULTICULTURAL EDUCATION FOR STUDENTS: A Study on the Implementation of Kurikulum Merdeka towards the Application of the "Deep Learning" Approach

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Abstract

This research aims to obtain information on strengthening multicultural education for students in the perspective of Kurikulum Merdeka and the readiness of implementing the "Deep Learning" approach in the education/learning process in schools in West Kalimantan. An in-depth study focuses on the implementation of Kurikulum Merdeka, forms of multicultural education strengthening, and fundamental principles that have been carried out in the curriculum that align with the "Deep Learning" approach. Information about the performance achievements of implementing Kurikulum Merdeka will become a framework for further improving the learning process towards the application of the "Deep Learning" approach, which is an educational policy that will be applied more intensively. Based on this thinking, the approach and method used in this research are qualitative, with in-depth data collection in schools in West Kalimantan, both in cities and districts. The data obtained are collected and analyzed qualitatively, and validated to provide ease for readers to understand the meaning of the data presented.

The results show that: (1) The implementation of Kurikulum Merdeka shows significant achievements in improving the quality of learning and student competence, with educational units able to develop relevant and effective curricula, as well as increased flexibility and autonomy of educational units. However, the obstacles faced include limited resources (trained educators, modern learning facilities, and supporting technology) and the lack of guidance and continuous training for teachers; (2) Strengthening multicultural education is done through the integration of global diversity values in the learning process and activities outside the classroom; (3) Kurikulum Merdeka applies the "Deep Learning" principle through holistic, contextual, and project-based learning that encourages the development of high-level thinking skills, metacognitive abilities, and collaboration.

INTRODUCTION

Multicultural education is an educational approach that emphasizes respect for cultural, ethnic, religious, and social value diversity in society. In this era of globalization, strengthening multicultural education is becoming increasingly important for students so that they can live harmoniously in a heterogeneous society. According to Banks & Banks (2019), multicultural education aims to help all students acquire the knowledge, attitudes, and skills necessary to participate in a culturally diverse society. Banks also emphasizes that multicultural education can increase students' awareness of plurality and encourage their active involvement in creating a more just and harmonious society.

Multicultural education is an educational strategy that uses the cultural differences that exist among students as a means to build a humanist, democratic, and inclusive character (Muarif, 2005). This education not only introduces students to various cultures but also teaches them to respect differences and avoid discriminatory attitudes. Green (2018) emphasizes that multicultural education should be applied in the school curriculum through the development of learning materials that reflect diversity and the creation of an inclusive learning environment.

According to Sleeter & Grant (2007), multicultural education is not just about cultural diversity in the curriculum but also about social justice, where education must promote equality for all students. This aims to make every student feel valued and have equal opportunities in the educational process. In Indonesia, strengthening multicultural education is essential in building a tolerant attitude in a pluralistic society.

Multicultural education emphasizes that multicultural education must build critical awareness of social injustice and instill a positive spirit of diversity, building tolerance in everyday life (Gay, 2018; Nieto & Bode, 2018). Therefore, education asserts that the modern world demands individuals who have cross-cultural communication skills and social justice and empowerment of communities that are underrepresented in the education system (Ladson-Billings, 2021; Grant & Sleeter, 2011).

Education must be a space for unity, where children from various backgrounds meet, learn together, and grow into a tolerant and competitive generation (Mu'ti, 2025). In the principle of equality in education, the education system must provide equal opportunities for all students, without regard to their cultural and social background (Banks, 2020). Thus, strengthening multicultural education for students is a strategic step in building a more harmonious and inclusive society.

Education today not only plays a role in creating a more open learning environment but also shapes students' character to be more prepared to face the challenges of the era of globalization. Education in the era of the Industrial Revolution 4.0 demands a transformation that is not only oriented towards mastering content but also towards developing critical thinking skills, creativity, and problem-solving based on data and technology.

According to Law Number 20 of 2003, the curriculum is a set of plans that contain goals, issues, teaching materials, and guidelines in the implementation of the learning process to achieve national education goals (Government of the Republic of Indonesia, 2003). The Independent Curriculum was introduced as an effort to provide flexibility in learning, adjust to the needs of

students, and emphasize a competency-based approach and differentiation in the learning process (Ministry of Education, 2024).

The Independent Curriculum has several characteristics, including a focus on essential material, reduction of subject matter, and development of high-level thinking skills. The implementation of the Independent Curriculum in various regions, including West Kalimantan, is a first step in building an educational ecosystem that is more adaptive to changes in the times.

However, along with the rapid development in the field of artificial intelligence (AI) technology, particularly "Deep Learning", the world of education is required to be more innovative in preparing students to face global challenges. "Deep Learning" as a branch of machine learning teaches computer systems to mimic the way humans learn and process information through artificial neural networks.

In the context of education, the "Deep Learning" approach refers to a learning model that allows students to dig deeper understanding, connect complex concepts, and apply their knowledge in various real-world situations (Schmidhuber, 2015). According to Fullan et al. (2014), 21st-century education must be oriented towards deep learning that enables students to acquire high-level thinking skills through exploration, reflection, and application of knowledge in the real world.

This research aims to obtain information on strengthening multicultural education for students in the perspective of the Independent Curriculum and the readiness of implementing the "Deep Learning" approach in the education/learning process, with a focus on in-depth study of the implementation of the Independent Curriculum, achievements, and obstacles faced, forms of multicultural education strengthening in the implementation of the Independent Curriculum, and fundamental principles that have been carried out in the Independent Curriculum that align with the "Deep Learning" approach in the education/learning process to improve the quality of education in Indonesia, particularly in West Kalimantan.

METHODS

This research employs a qualitative approach. As part of the application of the qualitative approach, the researcher first determines specific aspects that are an elaboration of the problem being studied and then incorporates them into the interview instrument as primary data. Next, secondary data collection is carried out related to learning documents that are relevant to the strengthening of multicultural education in the implementation of the Kurikulum Merdeka, which is carried out by the school, as well as an analysis of the principles of conformity with the application of the "Deep Learning" approach, which will be applied intensively.

To obtain the necessary information/data in accordance with the purpose of this research, the following research steps are taken: a) analyzing data/information or findings from previous research related to the orientation and application of teacher learning approaches; b) conducting interviews with school principals and teachers, as well as collecting data in the form of documents related to the implementation of the Kurikulum Merdeka; c) validating or checking the validity of data and documentation related to the research problem; d) analyzing and presenting data, and drawing conclusions.

The subjects of this research are school principals and teachers spread across three districts in West Kalimantan, covering 15 schools at the elementary, junior high, senior high, and vocational

high school levels. Data collection is carried out through direct communication techniques by conducting interviews and documentation on the implementation of the Kurikulum Merdeka in schools in West Kalimantan. Interviews are conducted both face-to-face (offline) and remotely (online). The data obtained through interviews are analyzed qualitatively using an interactive analysis model.

RESULTS AND DISCUSSION

1. Research Results

a. Implementation of Kurikulum Merdeka, Achievements, and Challenges Faced

The implementation of Kurikulum Merdeka is an effort to improve the quality of education in Indonesia by providing flexibility and autonomy to educational units in developing curricula that are relevant to the needs and characteristics of students. Kurikulum Merdeka was born out of the awareness that education in Indonesia needs to be adjusted to the needs of the 21st century, which demands critical thinking, creativity, and collaboration skills.

In Kurikulum Merdeka, educational units are given the freedom to develop curricula that are relevant to the needs and characteristics of students, as well as local and national contexts. This allows educational units to be more responsive to the needs and interests of students, and to be more effective in improving the quality of learning.

According to the results of the study, particularly through interviews, school principals and teachers revealed that Kurikulum Merdeka focuses on developing competencies that are relevant to the needs of the 21st century, such as critical thinking, creativity, and collaboration skills. This enables students to be more prepared to face global challenges and become future leaders.

In addition, Kurikulum Merdeka also encourages educational units to improve the quality of learning through the use of innovative and effective learning methods and strategies. In implementing Kurikulum Merdeka, educational units strive to prepare themselves with supporting infrastructure, such as adequate facilities and technology, effective management, and a school culture that supports the mission of Kurikulum Merdeka.

One of the significant achievements of Kurikulum Merdeka implementation is the increase in flexibility and autonomy of educational units in developing curricula that are relevant to the needs and characteristics of students. This enables educational units to be more responsive to the needs and interests of students, and to be more effective in improving the quality of learning.

However, in the implementation of Kurikulum Merdeka, there are several challenges faced by educational units. One of the main challenges is the limitation of resources, such as trained educators, adequate learning facilities, and supporting technology. Additionally, teachers feel that they need to have adequate skills and knowledge to implement Kurikulum Merdeka effectively. Educational units also face challenges in improving infrastructure readiness, management, and school culture that supports the implementation of Kurikulum Merdeka. Currently, most schools still have limited infrastructure, especially related to modern learning facilities and technology.

In the view of teachers, efforts to overcome the challenges faced by each educational unit need to be done by improving teachers' skills and knowledge in implementing innovative and effective curricula. Additionally, educational units need to establish cooperation with stakeholders,

such as parents, communities, and industries, to improve the quality of education and implement Kurikulum Merdeka effectively.

In this activity, an identification of the conditions of students, educators, education personnel, facilities and infrastructure, social culture, and regional needs is conducted. Considering the background of students who mostly come from rural areas in West Kalimantan, it shows that there is a need for contextual learning that is relevant to local life and can open up global perspectives.

Similarly, educators and education personnel have a relatively limited number, which becomes a challenge in implementing project-based learning (Project-Based Learning) that is characteristic of Kurikulum Merdeka. Facilities and infrastructure in schools are mostly sufficient, but the internet is not yet available, so digital-based learning still heavily depends on the teacher's personal initiative.

In the dimension of social culture and regional needs, the school is located in an area with potential natural and cultural wealth that can be integrated into contextual learning. The local industry's needs in business administration and graphic design also become the basis for selecting expertise concentrations.

Some other information reveals in more detail about the implementation of Kurikulum Merdeka based on its aspects, namely:

- 1). Analysis of Educational Unit Characteristics, which includes activities: (1) identifying the conditions of students, educators, education personnel, facilities and infrastructure, social culture, and regional needs; (2) reflecting on strengths and challenges in the learning process, (3) analyzing student readiness for in-depth learning, including self-regulation and high-level thinking readiness.
- 2). Formulation of Vision, Mission, and Goals, which includes activities: (1) formulating a vision and mission that reflects the long-term direction and goals of the educational unit, (2) adjusting the vision, mission, and goals to the characteristics of students and the 8 dimensions of graduate profiles, incorporating the principles of in-depth learning (awareness, meaningfulness, joy) in the school's vision.
- 3). Organization and planning of learning, which includes: (1) arranging the curriculum structure and content in the form of intracurricular, co-curricular (Pancasila student profile strengthening projects), and extracurricular activities, (2) developing a learning plan that includes goals, learning paths, and assessments, (3) designing learning experiences that include understanding, applying, and reflecting to support in-depth learning, (4) integrating multi/interdisciplinary knowledge in learning to increase relevance and connections between fields of study.
- 4). Evaluation and professional development, which consists of: (1) conducting regular evaluations of the curriculum of the educational unit, both short-term (semester/year) and long-term (4-5 years), (2) developing the professionalism of educators through training, reflection, and mentoring in the application of in-depth learning, (3) improving teachers' ability to apply inquiry-based, project-based, and problem-solving learning models.
- 5). Coordination and supervision, in the form of activities: (1) supervision by the education department or school supervisors in the implementation of the curriculum, (2) involving various stakeholders such as school committees, parents, and industry partners for vocational schools, (3)

utilizing digital technology in planning, implementation, and assessment of learning to increase effectiveness and flexibility.

- 6). Learning environment, by conducting several forms of activities: (1) developing a learning environment that integrates intellectual, emotional, and physical aspects to ensure a holistic learning experience, (2) creating an interactive learning space, both physically and virtually, to enhance collaboration and exploration of students, (3) building a learning culture that supports exploration, reflection, and social interaction in learning.
- 7). Assessment in in-depth learning, by paying attention to: (1) using formative and summative assessments that not only focus on the final results but also on the learning process and self-reflection, (2) applying assessment as learning, assessment for learning, and assessment of learning to measure conceptual understanding, critical thinking, and application in real life, (3) providing constructive and authentic feedback to improve the quality of learning and student motivation.
- 8). Strengthening multicultural education through learning processes and outside of learning processes.

In the implementation of Kurikulum Merdeka, in addition to identifying students and other factors, schools also conduct analysis to reveal the strengths and weaknesses of the school and opportunities for the school. Here is an example of an analysis conducted by a school in a remote area of West Kalimantan, namely Batu Nanta Elementary School, Melawi Regency, as follows:

Based on the analysis of the school environment's characteristics, an analysis of student identification, educators, education personnel, facilities and infrastructure, social culture, and school needs was developed to determine the direction of policy and the Curriculum of SDN 14 Batu Nanta.

The results of the analysis are as follows:

- a. Students, with several requirements: (1) able to fulfill the dimensions of the Pancasila student profile who can practice the teachings of their religion, apply religious tolerance, (2) able to adapt to all the potential possessed by the environment of SDN 14 Batu Nanta (fertile area, palm oil plantation industry), (3) able to be part of the solution to environmental problems and awareness of social issues (waste and social) and the environment such as waste management and natural conservation, (4) able to take a role in efforts to preserve and protect the environment and culture and show good adaptation potential to the social and natural environment.
- b. Facilities and infrastructure: The school facilities are quite adequate for learning. There are 12 classrooms, a library, sports field, UKS room, toilet, teacher's room, warehouse, and 32 units of Chromebooks that support digital learning. The school also has a garden as part of the P5 program. However, there are some shortcomings that are priorities for development, such as the lack of a prayer room, fish pond for environmental learning, science laboratory, and literacy gazebo as an open learning space.
- c. Social culture: The school is located in a pluralistic society, which is a strength in developing culture and tolerance. Cultural activities are regularly conducted at the school, village, sub-district, and district levels, in collaboration with the Melawi Regency Education and Culture Office. Cultural diversity is utilized as a learning resource and a unifying medium through various Pancasila student profile projects.

d. Regional needs: The regional government's policy supports environmentally friendly and character-based education. One of the forms is the P5 program "Mari Berkebun Sayur" (Let's Plant Vegetables), which has successfully brought SD Negeri 14 Batu Nanta to become one of the top 3 schools with the best P5 implementation at the district level. The school's funding sources come from government funds (BOS and other assistance), self-help funds (cooperatives, canteens), and community participation and CSR. The school's partnership is very broad and strategic, both with government agencies, religious institutions, private institutions, and local community resource persons, which strengthens the implementation of curriculum based on local wisdom and in-depth learning.

The data above is an example of the implementation of Kurikulum Merdeka in an elementary school in West Kalimantan. The implementation is considered quite good, as well as the analysis and reflection. In addition to this school, there are certainly many other examples of study results that can be analyzed further.

b. Forms of Strengthening Multicultural Education in the Implementation of Kurikulum Merdeka

Based on information obtained from schools that have implemented Kurikulum Merdeka, it is known that overall, schools are committed to developing inclusive education and appreciating cultural, ethnic, religious, and socio-economic background diversity. Efforts to strengthen multicultural values are carried out systematically, both in the learning process and through various extracurricular activities, so that students can become tolerant, open-minded, and respectful individuals.

The results of in-depth information from several schools in West Kalimantan reveal more specific forms of strengthening multicultural education in the implementation of Kurikulum Merdeka. For example, SMPN 19 Pontianak systematically integrates global diversity values into all aspects of formal and non-formal learning through curriculum synchronization, one of which is the formation of the Culture and Local Genius (CLG) program.

In the Pancasila Student Profile Strengthening Project (P5), students participatively research and document Pontianak Malay traditions, such as Jepin and Tundang dance arts, and then compare them with other cultures in Indonesian and Social Studies subjects, even Science. This project is carried out in flexible time blocks and coincides with the "School Culture Festival" CLG, where students showcase their cultural works.

Furthermore, daily habits such as the 3S Movement, School Literacy Movement, and joint Dhuha prayer are enriched with local wisdom narratives and brief lectures on interfaith harmony, utilizing a 10,206 m² lush area as a space for cultural practice and joint reflection.

The sociological foundation emphasizes the importance of curriculum responsiveness to cultural and religious diversity, which is then formalized through CLG teacher workshops and webinars with the Pontianak City Education Office to disseminate good practices and design local wisdom-based lesson plans. Monitoring and evaluation at the end of the period show a significant increase in the Diversity Climate and Student Character scores, rising from 74.26 to 79.34, and active participation of 95% of teachers and 88% of students in all multicultural activities.

The study at SMP 19 Pontianak shows that one of the ways adapted in LKPD to improve students' understanding in mathematics learning is by utilizing local culture as a context. By incorporating elements of local culture into teaching materials, learning becomes more contextual and exploratory.

Strengthening multicultural education in the learning process at school is manifested through various strategic approaches. Teachers actively integrate values of tolerance, respect for differences, and social justice into various subjects. Learning is packaged using teaching materials, case examples, and learning media that represent the cultural diversity of the archipelago and the world.

Multicultural education is also strengthened through various activities outside the classroom that are designed to foster a sense of togetherness, tolerance, and appreciation for diversity. Schools regularly hold national and religious celebrations, such as Independence Day, Kartini Day, Eid al-Fitr, Christmas, and Wesak Day, which involve all students to recognize and appreciate various traditions.

The essence of multicultural education in Kurikulum Merdeka aims to foster a mutual respect attitude towards cultural, religious, and socio-economic background differences in society. Observations show that multicultural education enriches the learning process by strengthening interaction among students from different cultural backgrounds, eliminating prejudice, and forming skills in cross-cultural interaction.

When these values are incorporated into the curriculum, it also supports the creation of social justice and strong inter-cultural relations, which are the foundation for a prosperous and harmonious society.

c. Fundamental Principles Implemented in Kurikulum Merdeka that Correspond to the "Deep Learning" Approach

Based on interviews with teachers, more specific information was obtained on the implementation of Kurikulum Merdeka principles that correspond to the deep learning approach. The application of these principles has been diverse in form, aligning with the deep learning approach.

At SMKN 1 Sukadana, students' readiness to engage in deep learning has been observed to vary. Most students have chosen expertise programs that align with their interests and talents, such as Hospitality, Visual Communication Design, Nursing, Accounting, and Computer and Networks (TKJ). This has become the foundation for their internal motivation to learn. As a result, students have developed self-regulation skills, including time management, goal-setting, and emotional control, which enables them to focus on the learning process.

Students who are interested in their chosen field tend to demonstrate independent learning, take responsibility for their tasks, and evaluate and reflect on their learning outcomes. This self-regulation readiness is also evident in project-based activities, such as the Pancasila Student Profile Strengthening Project (P5) and production units, which require students to design, plan, and complete projects independently and collaboratively.

However, some students are not yet fully prepared for self-regulation, particularly those who entered their chosen field due to external factors such as parental pressure or lack of knowledge

when choosing their major. This group requires more intensive support to build their motivation and independent learning skills gradually.

In general, SMKN 1 Sukadana has a strong foundation for developing deep learning through self-regulation readiness and students' Higher Order Thinking Skills (HOTS) potential. Nevertheless, it still requires responsive and differentiated learning strategies to ensure all students can achieve optimal development according to their characteristics and backgrounds.

The integration of Kurikulum Merdeka and the deep learning approach at SMA Negeri 1 Sekadau aims to develop students' potential comprehensively, encompassing spiritual, social, intellectual, and practical skills. The deep learning approach is directed towards forming a deep understanding and the ability to apply knowledge in various life contexts, which aligns with the essence of Kurikulum Merdeka.

The deep learning approach used in this school is manifested through project-based learning, which enables students to explore multicultural issues in a contextual manner. This approach fosters critical thinking, collaboration, and problem-solving skills, ultimately leading to improved learning outcomes.

The implementation of the Deep Learning approach at SMA Negeri 1 Sekadau is manifested through project-based learning, which enables students to explore multicultural issues in a contextual manner. Project-based learning (PBL) promotes deep learning by engaging students in meaningful activities, fostering critical thinking, and encouraging collaboration. This learning approach integrates knowledge and skills, facilitating a deeper understanding through active exploration and reflection, which ultimately improves learning outcomes in the educational environment.

This activity also involves active discussions and cross-cultural collaboration among students, thereby enhancing inclusive interaction and meaningful learning. The learning approach used includes project-based, collaborative, and problem-solving models. To meet the demands of 21st-century skills and technology utilization, this method is linked to the development of critical thinking, creativity, and effective problem-solving skills.

Although this approach has been implemented in Indonesia, its implementation has not yet fully met expectations, both in terms of process and results. The collaboration between the Kurikulum Merdeka and the Deep Learning approach at SMA Negeri 1 Sekadau is expected to prepare students to face global dynamics. By instilling values of tolerance and appreciation for diversity through learning experiences, students not only acquire academic knowledge but also develop adaptive character in a multicultural society.

To support the successful implementation of deep learning, teacher training is considered essential by teachers to enable them to understand and optimize deep learning. Additionally, developing teaching materials that are relevant to the local context of Sekadau and contain multicultural values is a crucial step. With this approach, SMA Negeri 1 Sekadau can create an inclusive and responsive learning environment that meets the real needs of students.

Information from teachers at SD Negeri 14 Batu Nanta suggests that there are three main strategies that can be applied to implement a deep learning approach at SD Negeri 14 Batu Nanta. To implement a deep learning approach, three main strategies can be applied:

- 1). Project-Based Learning

The first strategy is to design project-based learning that challenges students to connect theory with real-world practice. These projects are designed to be relevant to local issues, such as environmental conservation, waste management, or development of small businesses based on local wisdom. Through this approach, students not only understand concepts cognitively but also develop skills in problem-solving, teamwork, and effective communication of their findings.

2). Developing Formative-Reflective Assessment Rubrics

The second strategy is to develop formative-reflective assessment rubrics that encourage students to reflect on their learning process and outcomes. Assessment in deep learning is not only a measurement tool but also an integral part of the learning process itself. The rubric should be designed clearly and transparently, including specific achievement indicators such as critical thinking, creativity, collaboration, and problem-solving. With the guidance of this rubric, students are expected to recognize their strengths and weaknesses, enabling them to develop more effective and independent learning strategies.

3). Providing Space for Student Interest Exploration

The third strategy is to provide space for students to explore their interests according to the principles of differentiation, whether in terms of content, process, or learning products. Students are given the opportunity to choose topics, learning methods, or output forms that align with their interests, learning styles, and potential, making them feel motivated and invested in the learning process. By doing so, students not only learn to know but also learn to understand, explore, and create.

The implementation of Kurikulum Merdeka has fundamentally directed learning towards the principles of deep learning. Interviews with teachers from several schools reveal that students' readiness to engage in deep learning is generally at a developing stage, with potential that can be further nurtured through appropriate pedagogical approaches. At least two aspects have been implemented related to the essence of deep learning.

2. Discussion

The Kurikulum Merdeka essentially emphasizes the importance of strengthening national identity in a global context. This can be seen from the aspects of character development that are truly emphasized, such as the values of mutual cooperation, appreciating differences, and global diversity, which are important and fundamental parts of the curriculum. The Kurikulum Merdeka naturally reinforces multicultural values as a manifestation of Indonesia's diversity.

Multicultural education not only serves to introduce students to various cultures but also to build character and tolerance among young people (Ministry of Education, 2024). The existence of a curriculum that emphasizes the principles of Indonesian multiculturalism promotes understanding of pluralism, humanism, and democracy among students from diverse backgrounds. The importance of class discussions and direct interaction in the community helps students, especially those from different backgrounds, better understand Indonesia's diversity, which shows that a curriculum aligned with these principles can strengthen multicultural values (Rachmawati, 2015).

Multicultural education should integrate students' cultural experiences into learning to increase awareness and empathy towards diversity. In the Kurikulum Merdeka: (a) teaching modules are designed to highlight local wisdom and culture, (b) projects to strengthen the Pancasila

student profile often take themes of diversity and local culture (Banks & Banks, 2019). Multicultural values in the Kurikulum Merdeka, as applied in schools, are not only taught normatively but are brought to life through contextual and interactive learning activities that appreciate differences and promote cross-cultural cooperation (Hastasasi et al., 2024).

Multicultural education is not just about introducing cultural diversity but also about instilling values of inclusivity, empathy, and respect for differences through contextual and reflective pedagogical approaches. This is in line with the fundamental principles of curriculum development that appreciates diversity, teacher training to apply multiculturalism principles, and the creation of a learning environment that supports dialogue and collaboration among students from diverse backgrounds.

In practice, many educators do not deeply understand the concept of multicultural education, resulting in less-than-maximal implementation. Additionally, there is resistance from the community or institutions, with some parties possibly considering multicultural education to be in conflict with traditional values they uphold (Grant & Sleeter, 2011).

Research in junior high schools also shows the effectiveness of local wisdom-based learning. Sa'diah et al. (2021) revealed that utilizing local culture as a learning context can increase student engagement. They found that one way to adapt in LKPD to improve students' understanding in mathematics learning is by utilizing local culture as a context. By incorporating elements of local culture (e.g., local symbols, cultural stories, or traditional activities) into teaching materials, learning becomes more contextual and exploratory. A study shows that students involved in learning that prioritizes multiculturalism tend to have a more positive attitude towards classmates from different cultural backgrounds (Sari & Arta, 2025; Sa'diah et al., 2021).

This means that the Kurikulum Merdeka strongly emphasizes diversity (*kebhinekaan*) as a national strength. According to the Minister of Education and Culture Regulation No. 12 of 2024, on the sociological foundation, it is stated that the national context of Indonesia is characterized by social, cultural, religious, ethnic, racial, and regional diversity, which is a potential wealth (Kemendikbudristek, 2024). The curriculum should promote peace for issues of ethnicity, religion, race, and inter-group relations, as well as gender equality in learning. This statement shows that values of tolerance, mutual respect, and unity are the foundation for designing inclusive and diverse junior high school learning spaces.

The implementation of the CLG program shows that SMP Negeri 19 Pontianak City has carried out multicultural education reinforcement, especially local cultural multiculturalism. The official study of the Ministry of Education, Culture, Research, and Technology emphasizes the importance of curriculum flexibility to suit local contexts. The document states that curriculum development should be flexible, giving latitude to educational units and teachers to align the curriculum with student characteristics, educational unit vision and mission, and local culture and wisdom (Wahyudin, 2024); (Rachmawati, 2015).

In other words, junior high schools are given the space to adapt teaching materials to make them relevant to local customs and culture. The integration of local wisdom makes the learning process more meaningful because students learn from their immediate environment. For example, using local traditional ceremonies or folklore as a learning context can strengthen understanding of concepts while instilling cultural identity (Wahyudin, 2024). This is in line with the opinion of

education experts who state that collaboration between schools and the community is crucial in building a deeper understanding of multiculturalism (Judijanto et al., 2025).

In relation to the deep learning approach, students not only recognize cultural diversity superficially but are also able to critically analyze, understand historical context, social context, and cultural values that shape national identity. The implementation of the Kurikulum Merdeka already has a strong foundation for integrating deep learning-based learning, especially through active, contextual, and student-centered learning principles.

To maximize this integration, teachers need to be empowered to design learning tasks that challenge higher-order thinking and link learning to relevant and authentic multicultural content. The integration of the deep learning approach in the Kurikulum Merdeka aims to encourage students to learn deeply, meaningfully, and sustainably, not just memorizing concepts.

The application of this approach is carried out by facilitating active, reflective, collaborative, and student-centered learning. Referring to the theory of Powerful Learning by (Darling-Hammond & Oakes, 2019), deep learning requires learning experiences that are relevant to real life, fostering reflective, collaborative, creative, and critical abilities, and connecting theory with real-world practice.

The deep learning approach in education refers to learning that is deep, reflective, contextual, and meaningful. This requires the integration of conceptual understanding, real-world experience, and self-awareness in the learning process of students. Meaningful learning occurs when: "Students are able to link new information with prior knowledge, construct deep conceptual representations, and apply their understanding in new situations" (Bransford et al., 2000).

Deep learning is directed towards the development of higher-order thinking skills (HOTS), metacognitive abilities, and collaboration, which are the main goals of the Kurikulum Merdeka through the Pancasila Student Profile. The Kurikulum Merdeka provides broad space for the implementation of holistic and student-centered learning. The curriculum is designed to support contextual, flexible, and project-based learning, which promotes character strengthening and critical thinking skills through the integration of local and global values.

This supports the principle of deep learning, which emphasizes meaning-making, exploration, and reflection, and allows schools to adjust the learning process to the multicultural context and local wisdom. The Deep Learning approach is directed towards forming a deep understanding and ability to apply knowledge in various life contexts, which is in line with the essence of the Kurikulum Merdeka.

The application of these values is reflected in (1) Projects to strengthen the Pancasila student profile that emphasize the value of diversity and inter-cultural tolerance, (2) Extracurricular activities that include elements of local culture such as traditional arts and sports rooted in local wisdom.

The implementation of the Deep Learning approach at the school is manifested through project-based learning, which allows students to explore multicultural issues contextually. Project-based learning (PBL) promotes deep learning by engaging students in meaningful activities, fostering critical thinking, and encouraging collaboration. This learning approach integrates knowledge and skills, facilitates deeper understanding through active exploration and reflection, which ultimately improves learning outcomes in the educational environment (Sun, 2023).

This activity also involves active discussions and cross-cultural collaboration among students, thereby enhancing inclusive interaction and meaningful learning.

The learning approach used includes project-based, collaborative, and problem-oriented models. To meet the demands of mastering 21st-century skills and utilizing technology, this method is linked to the development of critical thinking, creativity, and effective problem-solving skills. Although this approach has been implemented in Indonesia, its implementation has not yet fully met expectations, both in terms of process and results (Nasir S, 2025).

The collaboration between the Kurikulum Merdeka and the Deep Learning approach shows very positive things in students, especially the growth of critical, deep, and creative thinking skills. The transformation of learning towards a deep approach also requires support from reflective, collaborative, and innovative teachers. Teachers' commitment to collaboration, training, and developing inquiry-based learning plans, projects, and problem-solving is a tangible form of implementing this view (Darling-Hammond & Oakes, 2019).

In the context of Indonesia's diverse society, the integration of multicultural values becomes an important aspect of deep learning. According to Mu'ti (2025) in the Academic Paper on Deep Learning, "Deep learning not only produces academic understanding but also self-awareness, social empathy, and strengthening of diversity values as democratic citizens." This is in line with the "Global Diversity" dimension in the Pancasila Student Profile and the implementation of the Pancasila Student Profile Strengthening Project (P5) carried out through themes of culture, environment, and interfaith tolerance.

The Kurikulum Merdeka implemented in several schools has included many important elements of deep learning, including flexibility in curriculum structure, implementation of the Pancasila Student Profile Strengthening Project (P5), strengthening formative assessment, and encouragement for reflection on learning. Teachers are starting to apply project-based learning models, inquiry, and problem-solving, which are characteristic of the deep learning approach that deep learning not only includes academic abilities but also shapes character, creativity, and 21st-century competencies through active and reflective involvement of students in the learning process (Sri Hanipah, 2023); (Asiati & Hasanah, 2022).

The Merdeka Belajar platform can strengthen teachers' readiness to integrate technology into vocational learning and facilitate flexible and deep learning approaches through systematic teaching devices and training (Hakim & Abidin, 2024). Collaborative learning management supported by digital technology strengthens the deep learning approach by promoting cross-cultural and background cooperation in completing joint tasks, which is very suitable for the multicultural spirit of the Kurikulum Merdeka (Dewi et al., 2024).

Data from the Ministry of Education (2024) shows that 75% of schools that implement the Kurikulum Merdeka report an increase in student learning motivation through formative assessment. Overall, this study shows that the Kurikulum Merdeka has a strong foundation to be integrated with the deep learning approach, both in terms of curriculum structure, learning strategies, use of technology, and strengthening multicultural values.

The effective implementation will depend on teacher readiness, institutional support, and ongoing professional development that encourages teachers to become reflective and adaptive learning facilitators. The readiness of several schools (especially vocational schools) to integrate the

Kurikulum Merdeka with deep learning is also supported by a holistic learning environment, such as the availability of practice spaces, utilization of digital technology, and involvement of the business and industry world (DU/DI) that enriches real learning experiences.

In addition, the learning culture developed through social interaction, reflection, and exploration gives students space to build deep understanding and form values of diversity. One of the strategic strengths of this integration is the inclusion of multicultural content in the Kurikulum Merdeka, which is very relevant to the context of students in vocational schools who come from diverse ethnic and cultural backgrounds.

The deep learning approach encourages students not only to understand differences but also to foster inclusive and empathetic attitudes. The multicultural content in the Kurikulum Merdeka has a strategic position in creating inclusive, relevant, and responsive education to Indonesia's socio-cultural diversity. This curriculum places diversity as a national strength that must be internalized in the learning process, both through integration in local content, differentiated learning approaches, and development of values of tolerance and diversity.

The Kurikulum Merdeka encourages the application of multicultural education that adapts to the local character and needs of students from various backgrounds, thereby creating a learning atmosphere that is equal and respects differences (Amaliyah et al., 2025). This opinion is in line with research by Aliyah (2024) which shows that the implementation of the Kurikulum Merdeka demands that teachers understand multicultural and global perspectives to build learning that is fair and meaningful.

The application of the Kurikulum Merdeka based on deep learning further strengthens the integration of multicultural values because deep learning not only focuses on cognitive aspects but also on social, emotional understanding, and active involvement of students in real life. Differentiated learning in the Kurikulum Merdeka gives space for recognition of the identity, needs, and unique potential of each student, thereby supporting deeper learning time (deep learning) and (Ningrum et al., 2023).

The integration of multicultural education can build national insight and nationalism through understanding and reflection on the values of diversity (Akhmadiyanto, 2024). This further strengthens that the development of the implementation of the Kurikulum Merdeka provides space for the growth and development of various positive attitude dimensions that become the substance of multicultural education for students in particular.

CONCLUSIONS

Based on the research findings and discussions that have been conducted, it can be concluded that the implementation of the Kurikulum Merdeka has shown significant achievements in terms of improving the quality of learning and student competencies. The Kurikulum Merdeka has successfully enhanced the quality of learning and student competencies through the development of a relevant and effective curriculum. This is evident from the improvement in higher-order thinking skills and student character.

Multicultural education has been effectively integrated into the learning process through the incorporation of global diversity values and extracurricular activities such as cultural celebrations

and exchanges. This helps to increase awareness and appreciation of cultural diversity among students.

The application of the "Deep Learning" principle: The Kurikulum Merdeka applies the principles of "deep learning" through holistic, student-centered, and project-based learning. This approach promotes the development of higher-order thinking skills and student character, preparing them to face future challenges. However, the implementation of the Kurikulum Merdeka also faces several challenges, including: limited resources: the lack of resources, both physical and non-physical, is a barrier to the implementation of this curriculum, lack of ongoing training for teachers: teachers need ongoing training to improve their skills in implementing this curriculum effectively.

Thus, the implementation of the Kurikulum Merdeka shows great potential in improving the quality of education in Indonesia, but it needs to be supported by improving teacher capacity and providing adequate resources to achieve better educational goals.

CONFLICTS OF INTEREST STATEMENT

The author declares that there is no conflict of interest regarding the publication of this paper.

AUTHOR CONTRIBUTIONS

The author was responsible for the research design, data collection, data analysis, manuscript writing, provided academic supervision, conceptual guidance, and critical revisions to improve the quality of the manuscript.

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