

THE DEVELOPMENT AND IMPLEMENTATION OF MERDEKA CURRICULUM IN 21 CENTURY

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Abstract

This study aims to collect information about the steps of curriculum development based on Kerangka Kualifikasi Nasional Indonesia (KKNI) and Kurikulum Merdeka. On the other side, this study examines the similarities and compatibility between these two development approaches with the principles of Educational Technology and the implementation of the Kurikulum Merdeka in 21st-century learning. The methodology used in this research is qualitative descriptive, which will present data in descriptive statements. Data were obtained from literature review of previous studies and government policies. The results of this study indicate the need for steps to accelerate the development of the Kurikulum Merdeka implemented in educational institutions where teachers can play a role as learning leaders capable of utilizing the Merdeka Mengajar Platform and prioritizing project based learning. Based on the literature review and research findings, it can be concluded that there is continuity between the KKNI curriculum and the Kurikulum Merdeka, and there are similarities and compatibility in accordance with the principles of Educational Technology. Therefore, in the implementation of the Merdeka Curriculum, all of these are essentially oriented towards improving the competencies of students and all supporting systems that aim to achieve high- quality graduates.

Introduction

One of the most crucial components in education that is often overlooked is the curriculum. The curriculum is complex and multidimensional, spanning from the beginning to the end of the learning experience, and it is the heart of education that must be evaluated innovatively, dynamically, and periodically according to the developments of the times. The current technological advancements necessitate society to continuously develop skills and knowledge in alignment with the progress of science and technology. The education sector must be prepared to face the changes and developments that occur, thereby equipping the skills of future generations for competition in a more advanced world. Efforts that educational units can undertake include continuously improving the existing educational curriculum. The curriculum consists of a series of learning plans that students must go through via a set of subjects to achieve specific goals. Fatirul & Walujo (2022)

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stated that the curriculum, as a learning plan, is an educational program designed to educate students. The designed program includes various activities that support the learning process of students, thereby leading to changes and developments in both behavior and skills of students according to educational and learning objectives.

The educational curriculum is dynamic. This is because in its development, the curriculum must adapt to the needs and characteristics of students according to its time. The design of the development of educational curriculum must prioritize the needs, opinions, learning outcomes, and interests of students, so that the center of education is the students themselves. The educational curriculum in Indonesia has developed several times, starting in 1947 with the name Curriculum Rentjana Pembelajaran 1947 until now developing into Curriculum Merdeka. There have been 10 changes in educational curriculum in Indonesia, namely in 1947, 1952, 1964, 1968, 1975, 1984, 1994, 2004, 2006, 2013, and 2022. The development of the Education Curriculum in Indonesia is organized and designed based on the Indonesian National Qualifications Framework (KKNi). This qualification is an effort to form a framework that sets standards for the quality of learning outcomes of students in various levels of education and training in Indonesia, ranging from elementary education to higher education. KKNi serves as a standard for educational units to plan a curriculum that is relevant to the needs of society, and to produce graduates who have the skills and knowledge needed by the workforce. The basic principles developed in KKNi assess the performance of individuals in scientific aspects, expertise, and skills in accordance with learning outcomes. The curriculum development is periodically developed to adjust to the development of science and technology, as well as the developments of time (Julaeha et al., 2021). In this 21st century, a teacher is capable of innovating in learning so that learning becomes more meaningful and enjoyable.

The development of educational curriculum in Indonesia has reached the development of Curriculum Merdeka. This curriculum is the development and implementation of an emergency curriculum initiated in response to the impact of the Covid-19 pandemic. The principle of this new curriculum is learning that is fully centered on students by introducing the term "Merdeka Belajar" (Freedom to Learn). This term is defined as a method that allows students to choose subjects that interest them. Schools have the right and responsibility to develop a curriculum according to their respective needs and characteristics. The policy of choosing a curriculum is expected to accelerate the phases of national curriculum reform. It can be said that the policy of providing school curriculum options is one of the efforts of change management.

The essence of Curriculum Merdeka is education based on the nature and times, where each student has their own talents and interests. The goal of freedom to learn is to effectively reduce learning delays during the Covid-19 pandemic. Although the 2013 Curriculum is still available, schools can still prepare to implement

the Merdeka curriculum. Thus, each educational unit can decide the right time to start implementing and applying the new curriculum independently according to its readiness. The idea of the essence of freedom to learn is to create a pleasant learning atmosphere without feeling burdened to achieve specific grades (Sudaryanto et al., 2020). Therefore, before schools implement a new curriculum, active steps need to be taken to conduct analysis. By taking these steps, it is hoped that schools can better understand the Curriculum Merdeka, starting from preparation, implementation to learning evaluation. This will greatly assist in accelerating the development of Curriculum Merdeka according to KKNi in the respective schools.

METHOD

This research method utilizes library research, involving the examination of various existing writings such as books, journals, articles, and other relevant sources. The process begins with collecting various sources, followed by reading and studying these sources to extract relevant core information, which is then synthesized into conclusions and subsequently articulated in writing. Therefore, it can be concluded that the type of data used is qualitative descriptive. Qualitative descriptive data is used to study the relationships of attitudes, activities, perspectives, and processes related to a phenomenon, aiming to describe objects or subjects according to reality (Hamzah, 2021).

This study employs qualitative research techniques with a descriptive approach. Qualitative research generates information or knowledge about descriptive information, in the form of written and oral information. It involves gathering information that can be followed up, especially in the form of information search and previous research studies.

Discussion

Indonesian National Qualifications Framework (KKNi)

The development of educational curricula in Indonesia is structured and designed based on the Indonesian National Qualifications Framework (KKNi). KKNi serves as a standard for educational units in designing curricula that are relevant to societal needs and producing graduates with the skills and knowledge required by the workforce. The fundamental principle developed within KKNi is to assess an individual's performance in scholarly aspects, expertise, and skills in accordance with learning outcomes.

The design of educational curricula naturally involves several stages to ensure that students' learning outcomes align with the intended learning objectives. According to Fatirul & Walujo (2022), there are 10 steps in the curriculum design process based on KKNi, which include:

1. Identifying the Learning Outcomes of graduates in a subject/course and formulating them into specific Graduate Learning Outcomes of the subject/course, as well as sub-learning outcomes of the subject/course that represent planned final abilities;
2. Conducting a learning analysis to provide an overview of what students will learn;
3. Performing a learning needs analysis to determine the scope of content and learning tools required;
4. Determining achievement indicators for the sub-learning outcomes of the subject/course as objectives in each lesson;
5. Establishing assessment criteria and developing assessment instruments based on achievement indicators;
6. Selecting and developing learning forms, learning methods, and assignments for students in learning activities;
7. Developing learning materials in the form of teaching materials and appropriate learning sources;
8. Developing and organizing formative evaluations;
9. Making improvements;
10. Developing and organizing summative evaluations to determine student achievement outcomes.

Merdeka Belajar

Merdeka Belajar is part of the new policy established by the Ministry of Education and Culture of the Republic of Indonesia (Kemendikbud RI). According to Nadiem, the curriculum policy related to Merdeka Belajar must undergo initial breakthroughs among educators before it is communicated or applied to students. Additionally, Nadiem also emphasizes the competence of teachers at any level; without translating from the basic competencies and their close relationship with the curriculum, effective learning cannot occur.

Implementing a learning system that emphasizes the formation of students' characters means that assessments should not only focus on academic aspects but also on the individual characteristics of each student. Thus, the new policy system related to Merdeka Belajar is expected to shape students who possess life skills applicable in community life.

The decision to revise the 2013 Curriculum into the Merdeka Curriculum is based on the Decree of the Minister of Education, Culture, Research, and Technology of the Republic of Indonesia Number 56/M/2022 dated February 10, 2022, concerning Guidelines for Implementing the Curriculum for Learning Recovery. This decision from Kemendikbud Ristek serves as the legal basis and reference for implementing the Merdeka Curriculum in schools, madrasas, and other educational

Institutions in Indonesia.

Fred Percival & Henry Ellington define curriculum design as the development process involving planning, validation, implementation, and evaluation of the curriculum. There are several key points in this curriculum design. Additionally, Saylor proposes 8 principles as guidelines in designing the curriculum, as follows:

1. Facilitate and encourage the selection and development of all types of learning experiences essential for achieving learning achievements.
2. Include all meaningful learning experiences in striving to achieve educational goals, especially for students learning under the guidance of educators.
3. Provide opportunities for educators to apply learning principles in selecting, guiding, and developing various learning activities at school.
4. Enable educators to adjust experiences according to the needs, capacities, and maturity of students.
5. Encourage educators to consider students' learning experiences acquired outside school and integrate them into school learning activities.
6. Provide continuous learning experiences so that students' learning activities evolve in line with previous experiences and continue into subsequent experiences.
7. Design the curriculum to assist students in developing character, personality, experiences, and democratic values that underlie cultural norms.
8. Be realistic, appropriate, and acceptable.

In the field of curriculum, there are at least three design patterns, as follows:

1. Subject-centered design: This is a curriculum design that focuses on instructional materials.
2. Learner-centered design: This curriculum design prioritizes the role of students.
3. Problem-centered design: This curriculum design centers around societal issues and problems faced.

Each design developed becomes a curriculum framework that includes various core elements: objectives, content, learning experiences, and evaluations that align with the core of each design model. Meanwhile, the development design of the Merdeka Curriculum refers to the learner-centered design pattern

In its implementation, there are stages to be followed in the curriculum development process. Here are several steps that can be taken in implementing the development of the Merdeka Curriculum:

1. Orientation/Needs: This phase involves awareness of the needs to address educational issues within schools. Regarding the implementation of curriculum development, school communities must understand the importance of existing curriculum development.

2. **Initiation:** Initiation is the initial step in implementing changes, which can originate from outside or within the school. Initiation can also be done by schools as learning communities to deepen understanding among school communities about various concepts and innovations.
3. **Implementation:** Implementation involves changes adopted by schools as school policies. Curriculum development is more effective when adopted as a school policy.
4. **Institutionalization or Sustainability:** When changes are continued, this phase can only be successfully achieved through sustained commitment, communication, and cooperation among school communities. Likewise, the sustainability of proposed curriculum development depends on these factors. Sustainability is also a key factor in the success or failure of the proposed curriculum.
5. **Maintenance:** This phase can either be strengthened or weakened depending on the commitment to the sustainability of curriculum implementation. The continuity of curriculum development is determined by the maintenance performed. In practice, this maintenance can be done through careful supervision of the implemented curriculum development

Curriculum development is also necessary for educational units adapted to the characteristics of the educational unit, the needs of students, and the current developments. In the implementation of Merdeka Curriculum, adaptation processes are necessary based on the basic framework of the curriculum itself, namely (1) National Educational Goals, (2) Pancasila Learner Profile, (3) Curriculum Structure, (4) Principles of Learning and Assessment, and (5) Learning Outcomes. The operational curriculum of educational units is adjusted according to the planning and organization of learning to contextualize educational units, making learning more meaningful.

Here are the steps for developing the Merdeka Curriculum in educational units:

1. Understanding the characteristics of the educational unit.
2. Developing the vision, mission, and objectives of the educational unit.
3. Planning includes ATP (Activity Teaching Plan), assessment, teaching modules, teaching media, and educational unit priority programs.
4. **Mapping learning:** both curriculum content, learning loads, intra-curricular, extracurricular, and co-curricular programs (Pancasila Learner Profile Strengthening Project/P5).
5. Planning mentoring systems, evaluation, and professional development.

To accelerate the development of the Merdeka Curriculum in educational units, the role of teachers as learning leaders is crucial and needs to be optimized. A teacher must be adaptable and able to utilize technology. One such technology used in education is PMM (Merdeka Teaching Platform), which can be used for self-directed learning access. PMM is a digital platform providing various learning services and content to support the implementation of Merdeka Belajar. Furthermore, PMM is

expected to enhance the quality of learning and expand learning access for students, especially in the context of 21st-century learning (Muadz, 2023).

Educational Technology

Educational technology is the systematic design of human resources, methods, and media to pursue educational goals. It encompasses instructional technology, which focuses on the development and use of media and learning processes to enhance learners' performance, as well as management technology, which focuses on using technology to manage and improve the overall educational system.

There are several experts in educational technology who provide insights into the domain or field of educational technology, but generally, there are several domains that are similar across different experts. Here are five domains of educational technology according to some educational technology experts:

1. Michael Molenda - Instructional Technology, which includes the design, development, use, and evaluation of technology in the learning process.
2. Seels & Richey - Educational Technology, which includes the utilization of resources, processes, and principles of technology to enhance the effectiveness of the learning process.
3. Januszewski & Molenda - Learning Technologies, which involves the use of technology to support, enhance, and facilitate learners' learning processes.
4. David H. Jonassen - Cognitive Tools, which involves the development and use of technology to assist learners in constructing knowledge and solving problems effectively.

Theories of educational technology are a collection of theoretical principles and concepts that govern and explain how technology can be applied in learning and teaching. Some theories commonly discussed in educational technology include:

1. Constructivist Theory - This theory states that learning involves the construction of knowledge by learners rather than just receiving information from teachers or media. Therefore, the use of technology should be designed to support learners' construction of knowledge.
2. Cognitive Theory - This theory states that learning occurs through cognitive processes such as attention, observation, and information processing. Therefore, the use of technology should be designed to enhance these cognitive processes.
3. Social-Cognitive Theory - This theory recognizes that learning occurs not only individually but also through social interaction. Therefore, technology should be used to facilitate better social interaction in learning.
4. Systems Theory - This theory views education as a complex system consisting of many variables. Therefore, the use of technology should be applied systematically and holistically to achieve optimal educational goals.
5. Change Theory - This theory states that the use of technology in education can

trigger changes in how we learn and teach. Therefore, the use of technology should be considered holistically, including social, cultural, and organizational aspects.

Conclusion

Development and renewal of educational curricula are crucial and necessary. In Indonesia, there is currently an effort to develop a new educational curriculum named Kurikulum Merdeka (Freedom Curriculum). True to its name, this development focuses on students' ability to receive learning, making Merdeka Belajar (Freedom to Learn) a method where students can choose and determine their own learning methods. Despite learning being tailored to students' learning abilities, educational institutions still uphold standard learning outcome goals. These standards represent the graduation criteria for student learning outcomes and skills that have been established and agreed upon collectively. Agreement on learning outcome goals is crucial as it underpins the entire process of developing subsequent learning activities. Therefore, the development of the Merdeka Curriculum must adhere to the Indonesian National Qualifications Framework (KKNI) as a guide for learning development, ensuring that graduation goals remain consistent and unchanged.

KKNI serves as the standard for qualifications in skills and abilities and involves 10 steps in developing a new curriculum. In contrast, the development of the Merdeka Curriculum utilizes only 5 development steps. Despite the difference in the number of curriculum development steps, upon reviewing their functions and sequences, there is no significant difference. The comparison of these two sets of steps can be seen in the following equivalence table.

Step	KKNI	Step	Merdeka curriculum
1	Identifying Learning Outcomes	1	Understanding the characteristics of educational units
2	Learning analysis	2	Formulating the vision, mission, and objectives of the educational unit
3	Learning needs analysis		
4	Determining Achievement Indicators		
5	Developing assessment instruments		Planning including ATP, assessment, teaching

6	Developing learning methods	3	modules, and priority programs for the educational unit
7	Developing teaching materials and resources	4	Developing materials
8	Developing evaluation	5	Planning mentoring systems, evaluation, and professional developmen
9	Improvement and revision		
10	sumatif Evaluasion		

Based on the comparison table above, it can be concluded that there are similarities and differences in the curriculum development steps between KKNi and the Merdeka Curriculum. One example of similarity is the first step, which involves identifying Graduate Learning Outcomes and understanding the characteristics of the educational unit. Both steps aim to deepen the understanding of the goals specific to the characteristics of the educational unit. For instance, learning outcomes for elementary school students will differ from those for junior high school students.

In addition to similarities, there are differences between the two types of curriculum development steps. One notable difference is in the final step. In the development of the Merdeka Curriculum, the final step involves planning mentoring systems, evaluation, and professional development. Whereas in KKNi, the final step is summative evaluation. Evaluation marks the conclusion of this development process without further steps to improve the evaluation. In contrast, the Merdeka Curriculum includes professional development as a subsequent step after evaluation. This step significantly helps educators in developing skills and capabilities, thereby improving the results from the previous evaluation stages.

The comparison of the two types of curriculum development steps according to KKNi and the Merdeka Curriculum shows that the number of steps used in developing new curriculum may differ, but it does not diminish the essence and core aspects required in developing curriculum according to KKNi. Based on this comparison, there is compatibility or similarity in terms of educational technology definitions and the theories encompassing them. Therefore, it can be concluded that both methods of curriculum development adhere to principles based on observation and processing of information, involvement, and necessary aspects of social interaction. This is crucial to ensure that students can culturally thrive and grow optimally according to their unique characteristics and strengths.

Moreover, both methods also consider unforeseen future circumstances, equipping students with competencies that enable them to adapt to changing

times. Curriculum development is essential for educational units and must adapt to changes and developments over time because a good curriculum is one that is timely.

Based on the conclusions drawn from the above studies and research findings, there are aspects that need to be considered in accelerating the development of the Merdeka Curriculum in educational units. One such step is optimizing the Merdeka Mengajar Platform (PMM). This optimization will impact the effective and efficient achievement of learning objectives. Therefore, it is necessary to conduct periodic online and offline socializations for relevant parties such as teachers, school officials, students, and parents. This is crucial because educators need to adapt to the changing times, making it imperative for them to operate and utilize PMM in teaching and learning.

Modern development inevitably involves teachers as key figures in implementing well-organized and initiated Merdeka Curriculum. Efficient learning must also be maintained for the noble purpose of independent study plans in the Merdeka Curriculum to continue, ensuring that all correctly formulated programs can be followed by all students in Indonesia. All of these efforts aim to further develop the educational landscape in Indonesia.

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