



Adaptation of Independent Learning Curriculum by Elementary School Teachers: Case Study in the Indonesia–Malaysia Border Region

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Abstract

This study examines the process of adapting the Merdeka Curriculum by elementary school teachers in the Indonesia-Malaysia border area, especially in Kapuas Hulu Regency, West Kalimantan. Using a descriptive qualitative approach and case study method, this study aims to explore adaptation strategies, implementation challenges, and leadership roles in implementing the new curriculum in the 3T (underdeveloped, outermost, and frontier) areas. Data were collected through direct observation, in-depth interviews with six class teachers and one principal, and analysis of learning documentation. The results of the study indicate that teachers' understanding of the basic concepts of the Merdeka Curriculum such as differentiated learning and the Pancasila Student Profile has not been accompanied by adequate technical skills in its implementation. Teachers developed adaptation strategies in the form of simplifying materials, using local content such as folklore and traditional games, and informal collaboration in developing learning. The main challenges to implementation include limited infrastructure (45%), minimal teacher training (30%), and conventional learning culture (25%). The role of the principal as a facilitator and coordinator is very significant in overcoming implementation gaps. This study concludes that the adaptation of the Merdeka Curriculum in border areas requires a flexible and contextual approach by considering local geographic, socio-economic conditions, and human resource capacity. Place-based policies and strengthening collaboration between schools, local governments, and communities are needed to realize the implementation of a just and equitable curriculum throughout Indonesia.

Keywords: Independent Curriculum, border areas, curriculum adaptation, basic education, 3T areas

1. Introduction

Education is a key element in the development of a nation, especially in producing the next generation who are intelligent, have character, and are ready to face global challenges (Atmaja, 2023). In Indonesia, equal access and quality of education are the main focus, especially in areas located in the 3T (underdeveloped, outermost, and frontier) regions. One of the areas that includes the 3T region is the Indonesia-Malaysia border region, such as Nunukan Regency in North Kalimantan and Entikong District in West Kalimantan. This region has unique challenges in implementing basic education, including limited infrastructure, low quality human resources (HR), and limited access to technology (Alimuddin, 2023).

In response to the challenges of education in Indonesia, the government launched the Merdeka Curriculum as part of the Merdeka Belajar program. This curriculum is designed to provide freedom to teachers and students in the learning process, with an emphasis on a student-centered approach, character building, and individual potential development. In addition, the Independent Curriculum prioritizes project-based learning that allows students to be more actively involved in a learning process that is more contextual and relevant to their needs (Williamson, 2023).

Although the goals of the Independent Curriculum are very noble, its implementation in the Indonesia-Malaysia border region still faces many obstacles. One of them is the gap in teacher training and professional development. In areas such as Krayan and Nunukan Regency, many teachers have not received the latest training on the curriculum. This results in low understanding and skills of teachers in implementing the Independent Curriculum effectively. According to a Kompas report (2021), hundreds of teachers in Krayan, Nunukan Regency, still refer to the 2006 Curriculum due to the limited training they have received (Sucipto, 2021).

In addition, limited infrastructure is also a major challenge. Poor road access and limited transportation make it difficult for teachers and teaching staff to reach school locations on time, especially during the rainy season. In some schools, students often wait a long time for teachers to arrive, or some teachers cannot teach due to obstructed access.

This situation certainly hinders the implementation of learning that should be flexible and project-based in the Independent Curriculum (Nurdiyanti et al., 2024).

Teacher welfare in border areas is often a problem. Most honorary teachers in this area receive very low salaries, some even only get IDR 1 million per year. This shows that inadequate teacher welfare has a direct impact on their motivation to improve the quality of learning. For example, according to Sujanto (2021), in several border schools, teachers who receive low salaries even have to work part-time to meet their living needs.

Nevertheless, several improvement efforts have been made to support the quality of education in border areas. The government through the Ministry of Education, Culture, Research, and Technology (Kemdikbudristek) has sent teaching staff and facilitated training on the Merdeka Curriculum. This is expected to provide teachers with the provisions to understand and implement this more innovative curriculum. In addition, the Pancasila student profile strengthening project is one of the main aspects in curriculum development in elementary schools (Marsidin, 2022).

Although there have been several efforts, there is still a gap between the policies implemented and the reality on the ground. Based on research by Sholeh et al. (2024), although principals and teachers have received training on the new curriculum, there are still problems in understanding the basic concepts of Merdeka Belajar, such as project-based learning and differentiated learning. This shows that in addition to training, more intensive guidance is also needed in assisting teachers in the field.

The Independent Curriculum, which aims to provide students with the freedom to choose and develop their interests, requires strong support from all parties, from the government, principals, to the community. Given the limitations faced by schools in border areas, the implementation of this curriculum must consider the local context and existing conditions. As in several border areas, digital-based teaching or the use of technology in learning is still hampered by the lack of facilities and stable internet access (Huda, 2023; Tlili et al., 2024; Sari, 2025).

However, there are also efforts from various parties to overcome this obstacle. For example, in Nunukan Regency, several initiatives have been carried out to improve teacher skills in using technology to support distance learning, although limited internet access is a major challenge (Sari, 2021). This program is proof that even though the geographical and socio-economic conditions in border areas are very challenging, adaptation to the new curriculum can still be done with the right support.

This study aims to explore how teachers in elementary schools in the Indonesia-Malaysia border area adapt the Merdeka Curriculum in this challenging context. By understanding the obstacles faced and the strategies used by teachers, it is hoped that more effective solutions can be found in supporting the implementation of this curriculum. This study is also expected to provide an important contribution to the development of education policies, especially in the context of the 3T region, which is often overlooked in national policies. Through this study, it is hoped that it can provide more contextual and solution-oriented policy recommendations to improve the implementation of the Merdeka Curriculum in the Indonesia-Malaysia border area. Thus, the quality of education in the area can be improved, along with the achievement of the goal of more equitable education throughout Indonesia.

2. Methods

2.1. Research approach and type

This study uses a descriptive qualitative approach that aims to describe in depth the reality of the implementation of the Merdeka Curriculum by elementary school teachers in the Indonesia-Malaysia border area. The qualitative approach was chosen because it is able to capture the nuances of subjective experiences, social meanings, and the dynamics of complex pedagogical practices, which cannot be explained through numerical data alone (Emon, 2024). This study is also descriptive because it does not attempt to test hypotheses, but rather explains phenomena as they are based on the social context that occurs in the field.

The type of research used is a case study, which is an in-depth study of a particular phenomenon in a limited but information-rich scope. The case study in this study focuses on how teachers in an elementary school in the border area adapt the Merdeka Curriculum in their daily learning practices. By using a case study approach, researchers can explore various aspects that influence the adaptation process, both in terms of internal school policies, teacher capacity, and the socio-economic conditions of the community around the school.

2.2. Location and subjects of the study

This study was conducted in one of the public elementary schools in Kapuas Hulu Regency, West Kalimantan, an area that geographically borders directly with Sarawak, Malaysia. This area is included in the 3T category (underdeveloped, outermost, and frontier), which often faces challenges in implementing national education policies. The location was selected purposively based on regional characteristics that were in accordance with the focus of the study, namely limited educational infrastructure, technological gaps, and administrative challenges in implementing the latest national curriculum.

The subjects of the study consisted of grade I to VI teachers, as well as the principals who led the educational units. The teachers were the main subjects because they were the direct implementers of the Merdeka Curriculum in the classroom. Meanwhile, the principal played a role in strategic decision-making and supervision of the implementation

of curriculum policies at the school level. Subjects were selected using purposive sampling techniques, namely based on certain considerations that were in accordance with the objectives of the study, such as their level of involvement in implementing the curriculum and their work experience in border education environments.

2.3. Data collection techniques

Data collection techniques in this study included observation, in-depth interviews, and documentation. Observations were conducted directly in the school environment to observe the learning process, use of teaching media, and the implementation of elements of the Independent Curriculum such as differentiated learning and strengthening the Pancasila student profile. Researchers systematically recorded every activity that reflected the teacher's efforts to adapt the curriculum in the classroom and school activities in general.

In-depth interviews were conducted with teachers and principals using semi-structured guides. This technique allows researchers to explore information more flexibly and in depth, and provides space for informants to express their views, experiences, and obstacles they face openly. In addition, documentation was also used as a source of supporting data. The documents collected included the Learning Implementation Plan (RPP), teaching modules, teacher reflection journals, school activity notes, and visual documentation in the form of photos and videos of learning activities.

2.4. Data analysis techniques

Data analysis in this study used the interactive analysis model from Miles and Huberman, which consists of three main stages, namely data reduction, data presentation (data display), and drawing conclusions or verification. At the data reduction stage, researchers filter and summarize data that has been collected from various sources to obtain information that is relevant to the focus of the research. This process includes sorting significant interview data, filtering observation results, and selecting documents that support the analysis. The next stage is data presentation, where the reduced data is arranged in the form of descriptive narratives, tables, or direct quotes from informants, making it easier to see patterns, tendencies, and relationships between themes. Data presentation is carried out systematically so that readers can clearly understand the context of the findings. Finally, the verification stage is carried out to draw valid and accountable conclusions. Conclusions are not drawn suddenly, but through a process of reflection and triangulation between data from observations, interviews, and documentation. This entire analysis process is carried out simultaneously from the beginning of data collection to the final stage of reporting research results.

3. Results and Discussion

3.1. Data reduction

Data reduction is the initial stage in the qualitative data analysis process that aims to filter, simplify, and summarize important information from the field. In this study, the reduction process was carried out from the beginning of data collection through direct observation at elementary schools in the Indonesia-Malaysia border area, precisely in Badau District, Kapuas Hulu Regency, West Kalimantan. This school is a representation of the geographical, social, and educational conditions that reflect the challenges and dynamics of adapting the Merdeka Curriculum in the 3T region (underdeveloped, outermost, and remote).

3.1.1. Overview of the research location

The location of this research is at a State Elementary School located in Badau District, Kapuas Hulu Regency, West Kalimantan. This area is included in the country's border area, directly bordering Sarawak, Malaysia. The existence of schools in the outermost region of Indonesia makes accessibility one of the main obstacles in implementing educational activities. The road to the school is still dominated by soil and rock conditions, which during the rainy season will be difficult for two-wheeled or four-wheeled vehicles to pass.

The school infrastructure is relatively simple, with limitations on learning facilities and supporting facilities such as unstable electricity. In addition, access to the internet network is also very limited, only accessible at certain points with weak cellular signals. This limitation has an impact on the limited ability of teachers and students to access digital learning resources, including the Merdeka Mengajar Platform and various teaching modules provided online by the Ministry of Education, Culture, Research, and Technology. The social environment of the surrounding community is also still very dependent on traditional lifestyles, with the main activities being agriculture and cross-border trade.

3.1.2. Informant profile

The informants in this study consisted of seven people, namely six class teachers (from grades I to VI) and one principal. The teachers have a homogeneous educational background, namely a Bachelor of Elementary School

Teacher Education (S1 PGSD). Their length of service varies quite a bit, ranging from 7 years to more than 20 years of teaching at the school. However, most teachers have never received formal training or technical guidance related to the implementation of the Merdeka Curriculum.

Their knowledge of the latest curriculum policies is mostly obtained informally through WhatsApp discussion groups, sharing teaching modules from the internet, and initiatives to share experiences among teachers. Several teachers admitted that they had participated in online webinars, but not intensively due to limited signal and limited devices. On the other hand, the principal who was one of the key informants in this study has more than 25 years of experience as an educator and school leader. He played a strategic role in encouraging teachers to try to adapt the Merdeka Curriculum, even though he had not received structured training. The principal also took the initiative to download learning materials from the internet while in the sub-district and save them in printed form or on a flash drive so that they could be used together by teachers.

3.2. Data presentation

3.2.1. Teachers' understanding of the independent curriculum

Based on the results of observations and interviews, the majority of teachers have a basic understanding of the Independent Curriculum, especially in the aspects of differentiated learning and character strengthening through the Pancasila Student Profile. However, they have difficulty in implementing this understanding practically in the classroom, especially related to the preparation of diagnostic assessments and the integration of character values in the RPP. This is due to the lack of available technical training and limited access to teaching materials in accordance with the Independent Curriculum. Table 1 below illustrates each teacher's understanding of the Independent Curriculum.

Table 1: Teachers' understanding of the independent curriculum

Teacher	Understanding the Independent Curriculum	Additional Information
Teacher I	Understanding differentiated learning	Still having difficulty compiling diagnostic assessments
Teacher II	Knowing the values of the Pancasila Student Profile	Not yet integrated into lesson plans
Teacher III	Understanding project-based learning	No real practice in class
Teacher IV	Having read the teaching module	Lack of confidence in implementing in class
Teacher IV	Regular discussions with other teachers	Understanding strengthened through informal collaboration

Table 1 shows that teachers' understanding is limited in terms of technical implementation, even though they know the basic concepts of the Independent Curriculum. This indicates a gap that needs to be bridged immediately through further training and mentoring.

3.2.2. Adaptation strategy of teachers in the field

In adapting the Independent Curriculum in schools, teachers in the field try to simplify existing teaching materials to make them more relevant to local conditions and culture. One of the efforts made is to replace textbook-based teaching materials with local materials, such as folklore, traditional games, and knowledge about the surrounding environment that are more easily accepted by students. This helps students to understand the learning materials more easily, as well as build their involvement and creativity in learning activities. Collaboration between teachers is also a common form of adaptation, especially in compiling lesson plans and designing learning activities that are more flexible and in accordance with students' abilities.



Figure 1: documentation of thematic learning using local folklore

Figure 1 shows a teacher reading a Dayak folklore in lower grade learning. Students listen while drawing the characters from the story. In Figure 1, it can be seen that the teacher uses a method based on local folklore to teach the values contained in the Independent Curriculum. This method allows students to be actively involved in learning.

3.2.3. Challenges of implementing the independent curriculum

The main challenges faced by teachers in implementing the Independent Curriculum in this school can be divided into three major categories: (1) limited infrastructure that hinders access to technology, (2) lack of technical training for teachers, and (3) student learning culture that is still trapped in conventional learning methods. Limited infrastructure, such as unstable internet connections and lack of technological devices, make digital-based learning almost impossible to implement in this school. In addition, limited training for teachers makes it difficult for them to apply the various innovative learning strategies offered by the Independent Curriculum. Finally, students who are accustomed to lecture methods and conventional learning find it difficult with a more active and project-based approach. The following are the challenges of implementing the Independent Curriculum in border elementary schools, as can be seen in table 2.

Table 2: Challenges of implementing the independent curriculum in border elementary schools

Type of Challenges	Percentage of Teachers (%)
Infrastructure Limitations	45%
Lack of Teacher Training	30%
Student Learning Culture	25%

Table 2 shows that limited infrastructure is the biggest challenge in implementing the Independent Curriculum, followed by the lack of training for teachers and the passive learning culture of students.

3.2.4. The Role of the principal

The principal plays a very important role in supporting the adaptation of the Independent Curriculum in this school. As a leader in the school, the principal took the initiative to introduce and coordinate various steps in the implementation of the curriculum. In addition, the principal actively facilitates teachers by providing opportunities to discuss various challenges faced in implementing the curriculum. The principal also facilitates the procurement of teaching materials by downloading them from the internet, and provides time for intensive mentoring for teachers. The strong leadership of the principal greatly helps teachers to be more confident in implementing the Independent Curriculum even in very limited conditions.

3.3. Discussion

The results of the study show that the adaptation of the Independent Curriculum in border areas is not just a matter of technical implementation, but more than that, it is a process of negotiation between the idealism of national policies and local realities. Teachers' knowledge of the Independent Curriculum is still at a basic level, and limited infrastructure weakens efforts to increase their capacity. This finding is in line with a study by Alimuddin, (2023) which states that the implementation of the new curriculum in the 3T region requires a context-based approach and empowerment of the local education community.

Adaptation of learning strategies by teachers shows a spirit of innovation, although not always based on a theoretical understanding of the curriculum. This strengthens the view that teachers in remote areas have great potential to make changes, as long as they receive affirmative policy support. Considering the complexity faced, the implementation of the Independent Curriculum in border areas needs to be designed with high flexibility. A place-based policy approach and strengthening the role of schools as learning communities are potential solutions. In this context, collaboration between schools, local governments, and local communities is the main key to realizing a fair and equitable curriculum implementation.

4. Conclusion

The results of the study indicate that teachers in border areas have a basic understanding of the Independent Curriculum, but face obstacles in its implementation due to limited technical training and infrastructure. Teachers develop adaptation strategies in the form of simplifying teaching materials, using local content, and collaborating between teachers to create learning that is more flexible and relevant to the local context. The main challenges identified include limited infrastructure (45%), lack of teacher training (30%), and students' conventional learning culture (25%). The principal plays a strategic role in facilitating curriculum adaptation through coordination, material procurement, and teacher mentoring. These findings confirm that the implementation of the Independent Curriculum in 3T areas requires a context-based approach and empowerment of the local education community.

This study contributes to the development of more contextual education policies for border areas. A place-based policy approach and strengthening the role of schools as learning communities are needed to realize the implementation of an equitable curriculum. Collaboration between schools, local governments, and local communities is the main key to the success of the adaptation of the Independent Curriculum in the Indonesia-Malaysia border areas.

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