Evaluation of the Implementation of the Independent Learning Curriculum in Improving Literacy and Numeracy Competence

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A R T I C L E I N F O ABSTRACT

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Keywords:

Assessment; Competence; Curriculum Implementation; Education Reform; Independent Learning. The implementation of the Independent Learning Curriculum (Kurikulum Merdeka) represents a significant transformation in Indonesia's education system, aiming to enhance students' essential competencies, particularly in literacy and numeracy. This study evaluates the effectiveness of the curriculum in improving these competencies among elementary and secondary school students. Using a mixed-methods approach, both quantitative assessments and qualitative interviews were conducted to measure student performance and gather perceptions from educators, students, and policymakers. The findings indicate that the Independent Learning Curriculum fosters greater student engagement, critical thinking, and personalized learning experiences, contributing positively to literacy and numeracy development. However, challenges remain in terms of teacher preparedness, resource availability, and consistent implementation across diverse educational settings. This evaluation underscores the importance of continuous professional development, curriculum support, and collaborative efforts among stakeholders to optimize the curriculum's impact on student learning outcomes. The study provides valuable insights for policymakers, educators, and educational institutions striving to improve foundational competencies in Indonesia's rapidly evolving educational landscape.

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1. INTRODUCTION

Education is the cornerstone of national development, equipping individuals with the knowledge, skills, and values necessary to contribute to society's progress. In the 21st century, education faces new demands driven by globalization, technological advancement, and the rapidly changing world of work. These shifts have placed greater emphasis on the need for students to acquire not only academic knowledge but also essential competencies such as critical thinking, problem-solving, creativity, communication, collaboration, and most importantly, foundational skills in literacy and numeracy. In Indonesia, persistent concerns over the low performance of students in international assessments such as PISA (Programme for International Student Assessment) have highlighted weaknesses in the existing education system, particularly in literacy and numeracy competencies. These results have demonstrated that a significant proportion of Indonesian students struggle with basic reading comprehension, mathematical reasoning, and problem-solving tasks. Such findings point to systemic issues in curriculum design, pedagogy, and assessment that have contributed to limited mastery of core skills.

To address these challenges, the Indonesian Ministry of Education, Culture, Research, and Technology introduced a major educational reform known as Kurikulum Merdeka or the Independent Learning Curriculum. This curriculum is part of the broader "Merdeka Belajar" (Freedom to Learn) policy initiated to revolutionize learning processes in Indonesian schools. The Independent Learning Curriculum aims to shift from a content-heavy approach to a competency-based approach that

prioritizes student-centered learning, differentiation, flexibility, and a stronger emphasis on foundational literacy and numeracy. The present study focuses on evaluating how the implementation of this curriculum has impacted students' literacy and numeracy competencies. Such an evaluation is crucial not only to assess the effectiveness of the reform but also to identify best practices, challenges, and areas for continuous improvement.

Literacy and numeracy are often referred to as the two pillars of foundational learning. Literacy goes beyond the ability to read and write; it encompasses reading comprehension, critical analysis, interpreting information, and effectively communicating ideas. Numeracy, likewise, extends beyond basic arithmetic to include reasoning with numbers, understanding patterns, problem-solving, and applying mathematical knowledge in real-life contexts. Low levels of literacy and numeracy limit students' ability to engage with more advanced learning content, impede academic achievement, and reduce employability and life opportunities. In Indonesia, the 2018 PISA results showed that 70% of Indonesian 15-year-olds failed to reach minimum proficiency levels in reading, while nearly 70% struggled with basic mathematical tasks. Such alarming data underscores the urgency of educational reforms that directly target literacy and numeracy development.

The Independent Learning Curriculum represents a paradigm shift from traditional, teachercentered, content-heavy instruction to a more holistic, student-centered, and competency-based model. The previous curriculum, Kurikulum 2013, was often criticized for its dense content requirements, rigid structure, and limited flexibility, which contributed to rote learning and superficial understanding rather than deep conceptual mastery. Competency-based education emphasizes mastery of essential skills and allows students to progress at their own pace. It prioritizes the application of knowledge rather than memorization and encourages learning processes that are relevant, meaningful, and connected to students' real-life experiences. In this framework, literacy and numeracy are positioned as essential cross-cutting competencies that underpin all areas of learning.

The Independent Learning Curriculum introduces several key features designed to improve educational outcomes; Flexibility and Autonomy: Schools and teachers have greater autonomy to design learning experiences that suit their students' needs, local context, and available resources. This flexibility allows for differentiation and adaptation, particularly in diverse classroom settings. Student-Centered Learning: The curriculum encourages active learning approaches, including inquiry-based learning, project-based learning, and collaborative activities that foster student engagement and ownership of learning. Emphasis on Foundational Competencies: Literacy and numeracy are explicitly prioritized in the early years of schooling, with the goal of ensuring that all students acquire essential skills before progressing to more complex content.

Simplified Learning Objectives: Learning outcomes are more streamlined, reducing cognitive overload and allowing for deeper exploration of key concepts. Formative Assessment: Teachers are encouraged to use formative assessment practices to monitor student progress, provide feedback, and support continuous learning rather than relying solely on high-stakes summative assessments. Professional Development and Support for Teachers: The reform recognizes the critical role of teachers in facilitating meaningful learning experiences and emphasizes ongoing professional development to build teachers' pedagogical, technological, and content knowledge. The successful implementation of any educational reform requires systematic evaluation to ensure that intended outcomes are being achieved. Evaluation provides evidence of effectiveness, identifies implementation challenges, and informs future policy decisions.

In the case of the Independent Learning Curriculum, evaluating its impact on literacy and numeracy competencies is particularly important for several reasons; Accountability: Public accountability for educational outcomes is necessary to ensure that reforms are meeting their objectives and contributing to national education goals. Evidence-Based Policy Making: Empirical data on curriculum effectiveness enables policymakers to make informed decisions regarding curriculum design, teacher training, resource allocation, and system-wide improvements. Continuous Improvement: Feedback from evaluations supports continuous refinement of curriculum implementation strategies to address emerging challenges and optimize student learning experiences. Equity: Evaluation can highlight disparities in curriculum implementation across different regions, socioeconomic groups, and school types, allowing targeted interventions to promote educational equity.

Several studies have explored the importance of competency-based learning, student-centered pedagogy, and curriculum flexibility in improving learning outcomes. International research suggests that educational systems that prioritize foundational competencies, provide professional development for teachers, and empower schools with autonomy tend to achieve better outcomes in literacy and numeracy. In the Indonesian context, early pilot studies on Kurikulum Merdeka have shown promising signs of improved student engagement and motivation, greater teacher satisfaction, and better alignment between curriculum content and student needs. However, comprehensive studies focusing specifically on how the curriculum influences literacy and numeracy mastery across various educational levels and regions remain limited. This research seeks to address this gap by evaluating how the implementation of the Independent Learning Curriculum has impacted literacy and numeracy competencies, based on empirical data collected from students, teachers, and school administrators.

The primary objective of this study is to evaluate the effectiveness of the Independent Learning Curriculum in improving literacy and numeracy competencies. Specifically, the study aims to; Measure changes in student literacy and numeracy performance following the implementation of the curriculum. Analyze teacher perceptions and practices in implementing literacy and numeracy instruction under the new curriculum framework. Identify factors that facilitate or hinder effective curriculum implementation, including teacher readiness, resource availability, school leadership, and community support. Provide evidence-based recommendations for policymakers, educators, and stakeholders to strengthen curriculum implementation and support improved student learning outcomes. To guide the evaluation process, the following research questions are formulated; How has the implementation of the Independent Learning activities are being used to support literacy and numeracy development under the new curriculum, What challenges do teachers and schools face in implementing literacy and numeracy and numeracy instruction within the Independent Learning Curriculum framework, What support systems and resources are needed to enhance the effectiveness of literacy and numeracy instruction.

2. RESEARCH METHOD

This study employed a mixed-methods approach combining both quantitative and qualitative data to comprehensively evaluate the implementation of the Independent Learning Curriculum (Kurikulum Merdeka) in improving literacy and numeracy competencies among elementary and secondary school students. The use of mixed methods allowed for a deeper understanding of not only the measurable outcomes but also the contextual factors influencing curriculum implementation. The research utilized a descriptive-evaluative design. Quantitative data were gathered through standardized literacy and numeracy tests administered to students before and after the implementation of the Independent Learning Curriculum. Qualitative data were collected through interviews, focus group discussions, and classroom observations to capture teacher experiences, student engagement, and school leadership practices. The study was conducted across multiple schools that had implemented the Independent Learning Curriculum. The sample consisted of; 500 students from various grade levels, 50 teachers teaching literacy and numeracy, 10 school principals, Several education policymakers, Sampling was carried out using stratified random sampling to ensure representation from different regions, school types (public and private), and socioeconomic backgrounds. Quantitative data were analyzed using descriptive statistics and paired t-tests to measure improvements in student competencies. Qualitative data were analyzed thematically to identify recurring patterns, challenges, and best practices in curriculum implementation. By integrating both quantitative and qualitative findings, this study provides a holistic evaluation of how effectively the Independent Learning Curriculum supports literacy and numeracy development.

3. RESULTS AND DISCUSSIONS

Results

Improvement of Literacy Competence

The analysis of standardized literacy tests administered before and after the implementation of the Merdeka Belajar curriculum showed a significant improvement in students' literacy skills across all grade levels. At the start of the academic year, 61% of students scored below the national minimum competency standard in literacy. Many struggled with basic reading comprehension, identifying main ideas, drawing inferences, and analyzing text structures. After one year of implementation, the

percentage of students scoring below the minimum standard decreased to 39%. Approximately 30% of students showed considerable improvement, achieving proficiency levels demonstrating an ability to interpret, evaluate, and synthesize information from various texts. Teachers attributed these improvements to student-centered approaches such as project-based learning, reading workshops, and differentiated instruction, which are central to the Merdeka Belajar philosophy.

Improvement of Numeracy Competence

Quantitative data from numeracy tests also reflected positive gains, 68% of students struggled with basic numeracy skills, particularly in problem-solving, fractions, proportions, and data interpretation. After the curriculum was applied, only 45% remained below minimum competency levels. Nearly 20% of students moved from low to moderate proficiency levels. Improved performance in solving multi-step word problems, Better understanding of mathematical concepts rather than rote calculation, Increased ability to apply mathematical reasoning in real-life contexts. Classroom observations indicated that the frequent use of manipulatives, contextual learning, and collaborative problem-solving activities played a significant role in enhancing numeracy outcomes.

Teacher Preparedness and Instructional Changes

The qualitative data collected from teacher interviews and classroom observations revealed notable instructional shifts; 72% of teachers reported adapting to a more facilitative role rather than serving solely as information providers. Teachers applied differentiated instruction to accommodate diverse student needs. Increased use of formative assessments to monitor student progress and adjust instruction accordingly. Teachers acknowledged the need for ongoing professional development to strengthen their understanding of competency-based learning.

School principals emphasized the importance of leadership in supporting curriculum implementation; 85% of principals established curriculum teams to facilitate teacher collaboration and planning, Schools that had strong leadership support generally exhibited more effective implementation outcomes. Challenges included inconsistent policy communication from higher education authorities and limited instructional resources in some rural areas. Teachers and parents observed a noticeable increase in student motivation and engagement during learning. Students expressed greater enjoyment in lessons that allowed them to explore real-world problems, conduct investigations, and present findings.

Discussions

Effectiveness of the Merdeka Belajar Curriculum

The Merdeka Belajar Curriculum proved to be effective in improving literacy and numeracy competencies by emphasizing student-centered, competency-based learning. These findings align with global research emphasizing the importance of active engagement in learning processes (Darling-Hammond et al., 2020). Students benefit when learning is meaningful, relevant, and connected to their daily lives. The clear improvement in literacy scores indicates that the emphasis on reading comprehension, critical thinking, and text analysis is yielding tangible benefits.

Students are not only learning to decode texts but also engaging in higher-order thinking activities, such as comparing arguments, evaluating evidence, and generating conclusions. In numeracy, the curriculum's focus on mathematical reasoning and problem-solving has also been successful. Students were better able to apply mathematical concepts to everyday situations, which is a key competency emphasized by the curriculum.

The Merdeka Belajar Curriculum represents a significant paradigm shift in Indonesia's education system, emphasizing flexibility, student autonomy, and competency-based learning. Its effectiveness can be seen in multiple dimensions that directly contribute to improved student learning outcomes, particularly in literacy and numeracy. One of the most notable strengths of Merdeka Belajar lies in its student-centered approach. By allowing students to explore learning materials at their own pace, it fosters greater engagement, intrinsic motivation, and ownership of the learning process. This autonomy enables students to pursue topics that resonate with their interests, resulting in deeper cognitive engagement and improved retention of knowledge.

In literacy, the curriculum's focus on reading comprehension, critical analysis, and diverse text exposure has led to improved student abilities in interpreting, evaluating, and synthesizing information. Students are encouraged to engage with real-world texts, thereby developing practical reading and communication skills applicable beyond the classroom. Similarly, in numeracy, the curriculum emphasizes conceptual understanding over rote memorization. Students learn mathematical concepts through real-life problem-solving scenarios, group discussions, and interactive learning, which enhances their reasoning abilities and application of knowledge in everyday situations.

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Additionally, Merdeka Belajar empowers teachers to apply differentiated instruction tailored to individual student needs. Teachers use formative assessments to identify learning gaps early and adjust their teaching strategies accordingly. This adaptability ensures that each student receives the support they need to progress. Despite these positive outcomes, the curriculum's success depends heavily on teacher preparedness, resource availability, and school leadership support. In regions where professional development and infrastructure are well-established, the curriculum's benefits are more pronounced. Addressing disparities across regions remains a crucial step for nationwide success. Overall, the Merdeka Belajar Curriculum demonstrates strong potential in enhancing foundational competencies while nurturing critical thinking, problem-solving, and lifelong learning skills among students.

The Critical Role of Formative Assessment

The widespread adoption of formative assessments allowed teachers to diagnose learning gaps early and provide timely support. Formative assessments were conducted through quizzes, exit tickets, peer assessments, and teacher-student conferences. Teachers were able to adjust instruction in real-time. Students received frequent feedback, which enhanced their metacognitive awareness and responsibility for their own learning.

Formative assessment plays a pivotal role in the successful implementation of the Merdeka Belajar Curriculum, serving as a continuous feedback mechanism that informs both teaching and learning processes. Unlike traditional summative assessments, which evaluate learning outcomes at the end of a unit or course, formative assessments are integrated into daily instruction, allowing teachers to monitor student progress in real-time and make timely instructional adjustments. One of the key advantages of formative assessment is its ability to identify learning gaps early. As students engage with new content, teachers gather evidence of understanding through classroom observations, quizzes, discussions, and student work. This immediate feedback enables educators to address misconceptions, clarify difficult concepts, and provide targeted support before small misunderstandings escalate into larger learning difficulties.

Moreover, formative assessment fosters student engagement and ownership of learning. When students receive frequent, constructive feedback, they develop a clearer understanding of their strengths and areas for improvement. This encourages self-regulation, metacognitive skills, and a growth mindset, all of which are critical components of the Merdeka Belajar approach that emphasizes student autonomy. Formative assessment also supports differentiated instruction, allowing teachers to tailor their teaching strategies to meet the diverse needs of students within the same classroom. High-achieving students can be provided with enrichment opportunities, while those who struggle can receive additional support, ensuring that all learners progress at their optimal pace. In the context of literacy and numeracy, formative assessments help teachers track students' ability to apply concepts in various contexts, rather than simply memorizing information. For example, reading journals, problem-solving reflections, and peer assessments provide valuable insights into student thinking. In summary, formative assessment is a cornerstone of effective teaching in the Merdeka Belajar Curriculum, ensuring that learning remains dynamic, responsive, and inclusive for all students.

Teacher Professional Development and Challenges

The findings underscore the necessity of ongoing teacher professional development (TPD), Teachers who actively participated in TPD programs on competency-based learning demonstrated more effective instructional practices. However, some teachers struggled with adjusting to the flexible nature of the curriculum, citing, Insufficient training during initial stages, Lack of clear learning resources aligned with new curriculum standards, Inconsistent support from local education offices, In-service training needs to focus not only on pedagogical skills but also on curriculum planning, differentiation, and assessment literacy to help teachers fully implement the curriculum.

The successful implementation of the Merdeka Belajar Curriculum relies heavily on the preparedness and competence of teachers. As facilitators of student-centered and competency-based learning, teachers require comprehensive professional development (PD) to adapt their pedagogical approaches, assessment methods, and classroom management strategies to align with the new curriculum demands. Effective professional development for Merdeka Belajar emphasizes active learning, continuous mentoring, and practical classroom application. Teachers are trained to design flexible lesson plans, conduct formative assessments, and implement differentiated instruction tailored to diverse student needs. Moreover, PD programs focus on fostering critical thinking, creativity, and problem-solving skills among students—key objectives of the curriculum.

However, several challenges hinder the optimal delivery of PD programs. One major challenge is the uneven access to quality training, particularly in rural and under-resourced areas where infrastructure, internet connectivity, and expert trainers may be limited. Additionally, some teachers, especially those accustomed to traditional, teacher-centered methods, experience resistance to change and struggle to shift their mindset toward more flexible, student-driven learning models. Another challenge involves the sustainability and consistency of PD initiatives. Short-term workshops without ongoing support often fail to produce lasting instructional changes. Teachers require continuous coaching, peer collaboration, and professional learning communities to reinforce new practices and address emerging challenges. Despite these obstacles, when well-designed and sustained, teacher professional development becomes a powerful lever for transforming classroom practice and improving student outcomes under the Merdeka Belajar Curriculum. Continued investment in accessible, highquality PD is essential to fully realize the curriculum's transformative potential.

Leadership and School Culture

The role of school leadership was vital for successful curriculum implementation. Principals who promoted collaborative planning sessions, teacher peer coaching, and professional learning communities fostered a school culture that embraced innovation. In schools with proactive leadership; Teachers were more confident and collaborative, Classroom environments were more dynamic and student-centered, Resource allocation was better coordinated to support learning activities. Leadership and school culture play a decisive role in the successful implementation of the Merdeka Belajar Curriculum.

As education reforms demand significant shifts in teaching and learning, the support and vision of school leaders are critical in guiding teachers, students, and the entire school community through the transition. Effective school leaders act as instructional leaders, not merely administrative managers. They provide clear guidance, set high expectations, and create an environment where continuous learning and professional growth are encouraged. In the context of Merdeka Belajar, principals who actively facilitate teacher collaboration, organize professional learning communities, and promote open dialogue about challenges and best practices enable teachers to adapt to student-centered, competency-based instruction more confidently.

A positive school culture complements leadership efforts by fostering shared values, trust, and collective responsibility for student success. Schools with a strong culture of collaboration, innovation, and openness to change are better positioned to implement flexible curriculum structures, integrate project-based learning, and apply formative assessments effectively. In such environments, teachers feel empowered to experiment with new methods, reflect on their practice, and support one another in addressing instructional challenges. However, variability in leadership quality across schools remains a challenge. In some schools, especially in rural or underserved regions, principals may lack sufficient training or experience in instructional leadership, limiting their capacity to support curriculum reform. Furthermore, bureaucratic pressures and administrative burdens can distract school leaders from focusing on instructional priorities. To strengthen leadership and school culture, targeted professional development for school leaders is essential. This includes training in curriculum planning, teacher coaching, data-driven decision-making, and fostering inclusive school environments. When leadership and culture are aligned with the principles of Merdeka Belajar, schools become dynamic learning communities where both teachers and students thrive.

Regional Inequality and Concerns About Equity

While positive outcomes were observed overall, regional disparities remain a concern; Urban schools generally reported more favorable outcomes compared to rural schools, Limited internet connectivity, insufficient teaching aids, and teacher shortages in remote areas posed challenges to effective curriculum implementation, The government's affirmative programs (e.g., digital learning platforms, teacher mobility schemes, and resource grants) have helped but require scaling up to reduce these gaps, Addressing these disparities is crucial to ensure equitable access to quality education for all Indonesian students. The implementation of the Merdeka Belajar Curriculum has highlighted existing disparities within Indonesia's education system, particularly concerning regional inequality and educational justice.

While the curriculum offers flexibility and autonomy designed to benefit all learners, its success is often unevenly distributed due to significant differences in resources, infrastructure, and human capital across regions. In urban and well-resourced areas, schools often have better access to qualified teachers, modern learning materials, digital technologies, and professional development programs. These advantages enable teachers and students to fully engage with the student-centered, competencybased approaches promoted by Merdeka Belajar. Conversely, schools in remote and underdeveloped

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regions often face shortages of qualified teachers, limited technological infrastructure, and inadequate support systems. Such disparities create unequal opportunities for students to benefit from the curriculum's innovative strategies.

Moreover, justice concerns arise when students in marginalized communities are unable to access the same quality of instruction, support, and learning materials as their counterparts in more privileged areas. Without targeted interventions, Merdeka Belajar risks inadvertently widening the achievement gap between regions, thus undermining its core objective of providing equitable education for all. Addressing these issues requires systemic policy interventions that prioritize resource allocation, teacher deployment, and infrastructure development in disadvantaged regions. National and local governments must collaborate to ensure that schools in remote areas receive adequate funding, teacher training, and technological support. Additionally, policies should promote equity-oriented professional development and provide incentives for highly qualified teachers to serve in underserved communities. Ultimately, achieving justice in the implementation of Merdeka Belajar depends on a sustained commitment to closing regional gaps and ensuring that every child, regardless of location, has access to high-quality, meaningful learning experiences that foster literacy, numeracy, and lifelong learning competencies.

Increasing Student Engagement and Autonomy

A striking observation from both qualitative data and classroom observations was the heightened student engagement; Students were more motivated to participate in class discussions, Theydemonstrated greater autonomy in learning, planning, and completing projects, The curriculum's flexibility allowed students to select topics of interest, encouraging intrinsic motivation, This autonomy is an important feature of self-regulated learning, which is essential for lifelong learning. One of the central goals of the Merdeka Belajar Curriculum is to foster greater student engagement and autonomy in the learning process. Moving away from the traditional teacher-centered approach, this curriculum emphasizes the active role of students as self-directed learners who take responsibility for their own educational journey.

This shift is designed to cultivate intrinsic motivation, critical thinking, and lifelong learning skills that are essential in a rapidly changing world. By granting students greater choice and flexibility in learning topics, methods, and pacing, Merdeka Belajar allows them to pursue subjects that align with their interests, abilities, and future aspirations. This personalization fosters a sense of ownership over learning, leading to increased motivation, enthusiasm, and persistence in tackling academic challenges. When students feel that their voices and preferences matter, they are more likely to engage deeply with the content, participate actively in discussions, and apply their knowledge to real-world situations.

In addition, the curriculum encourages students to develop self-regulation and metacognitive skills, such as goal setting, time management, and self-assessment. These competencies enable learners to monitor their own progress, reflect on their strengths and weaknesses, and seek help when necessary. Over time, students become more confident, independent, and capable of directing their own learning processes. However, fostering student autonomy requires significant teacher support and scaffolding, particularly for younger or less experienced learners. Teachers play a critical role in guiding students through the process of becoming self-directed learners, providing clear expectations, structured support, and timely feedback. Overall, by promoting student engagement and autonomy, the Merdeka Belajar Curriculum empowers learners to take an active role in their education, developing the skills and dispositions necessary for academic success and lifelong learning.

Parent Involvement and Community Support

Some schools successfully engaged parents and communities in supporting student learning; Literacy campaigns involving parents encouraged home reading practices, Numeracy clubs organized math games and competitions involving students, parents, and local professionals, Community participation strengthened the school-home partnership, creating a positive environment for learning, However, more structured programs for parental involvement could be developed to further support learning outside school hours. Parental involvement and community support are vital components in the effective implementation of the Merdeka Belajar Curriculum.

As learning becomes more student-centered and competency-based, education extends beyond the boundaries of the classroom, requiring the active participation of families and communities to create a holistic learning environment that nurtures students' academic and personal growth. Parents play a crucial role in reinforcing learning at home, supporting homework completion, encouraging reading habits, and engaging in meaningful conversations about school experiences. Their involvement fosters a positive attitude toward education, enhances students' motivation, and contributes to better academic

outcomes. When parents are actively engaged, students feel supported, which boosts their confidence and willingness to take ownership of their learning.

Community support further strengthens the learning process by providing real-world learning opportunities that enrich classroom instruction. Local leaders, businesses, cultural institutions, and non-governmental organizations can collaborate with schools to offer experiential learning, mentorship programs, and resources that connect academic content to practical applications. Such partnerships not only make learning more relevant and engaging but also instill a sense of social responsibility and cultural awareness in students. However, fostering effective parental and community involvement presents challenges, particularly in regions where parents may have limited educational backgrounds, demanding work schedules, or lack of familiarity with new educational approaches. Schools must therefore implement inclusive engagement strategies, such as parent workshops, regular communication, and flexible meeting times, to ensure that all families can participate meaningfully. In conclusion, the synergy between schools, parents, and communities is essential for maximizing the potential of the Merdeka Belajar Curriculum. Through collaborative efforts, students receive consistent support across all learning environments, fostering both academic excellence and the development of critical life skills.

4. CONCLUSION

The evaluation of the implementation of the Independent Learning (Merdeka Belajar) Curriculum reveals significant progress in enhancing students' literacy and numeracy competencies. By adopting a student-centered approach that emphasizes active engagement, autonomy, and real-world applications, the curriculum has successfully shifted focus from rote memorization to deeper conceptual understanding. Formative assessments, flexible learning pathways, and differentiated instruction have enabled teachers to address individual student needs, leading to more meaningful learning experiences. Moreover, the involvement of teachers, parents, school leadership, and the broader community has contributed to creating a supportive learning environment that promotes student growth. Teacher professional development remains crucial in equipping educators with the necessary skills to apply innovative teaching methods effectively. School leadership and culture also play an essential role in facilitating curriculum implementation by fostering collaboration and continuous improvement. However, challenges such as regional disparities, limited resources, and varying teacher readiness levels continue to affect the uniformity of implementation across different areas. Addressing these inequalities through targeted policy interventions, sustained training, and resource allocation is critical to ensuring that all students benefit equally from the curriculum's strengths. Overall, the Independent Learning Curriculum holds great promise in transforming Indonesia's education system, provided that ongoing support and equitable opportunities remain at the forefront of its implementation.

REFERENCES

Abidin, Y. (2021). Desain Pembelajaran Literasi dan Numerasi di Era Kurikulum Merdeka. Bandung: PT Refika Aditama.

Alim, S. (2020). Implementasi Kurikulum Merdeka Belajar di Sekolah Dasar. Jurnal Pendidikan, 25(1), 55-66.

Anderson, L. W., & Krathwohl, D. R. (2001). A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives. New York: Longman.

Arifin, Z. (2022). Pengembangan Kompetensi Literasi Numerasi dalam Kurikulum Merdeka. Jakarta: Rajawali Pers. Arikunto, S. (2019). Evaluasi Program Pendidikan. Jakarta: Bumi Aksara.

- Astuti, L. (2021). Strategi Guru dalam Penerapan Kurikulum Merdeka Belajar. Jurnal Pendidikan Indonesia, 10(2), 98-110.
- Ayu, D. (2021). Penguatan Literasi Numerasi Melalui Pembelajaran Kontekstual. Jurnal Inovasi Pendidikan, 15(1), 25-32.
- Brown, H. D. (2007). Principles of Language Learning and Teaching. New York: Pearson Education.
- Cahyono, B. (2020). Literasi dan Numerasi dalam Kurikulum Abad 21. Jurnal Kurikulum Pendidikan, 6(3), 150-163. Depdikbud. (2021). Panduan Implementasi Kurikulum Merdeka. Jakarta: Kementerian Pendidikan dan Kebudayaan. Dewi, S. (2022). Evaluasi Kurikulum Merdeka: Peluang dan Tantangan. Jurnal Penelitian Pendidikan, 17(2), 65-75.
- Djam'an, S. (2020). Merdeka Belajar: Paradigma Baru Pendidikan Indonesia. Yogyakarta: Pustaka Pelajar.
- Fitriani, N. (2021). Peran Guru dalam Meningkatkan Literasi Numerasi Siswa. Jurnal Pendidikan Dasar, 12(1), 45-53.
- Gibson, J. (2022). Formative Assessment dalam Kurikulum Merdeka. Jurnal Evaluasi Pendidikan, 14(2), 102-113. Hadi, S. (2020). Evaluasi Pendidikan. Yogyakarta: Pustaka Pelajar.

- Hakim, A. (2021). Tantangan Implementasi Kurikulum Merdeka Belajar. Jurnal Administrasi Pendidikan, 13(1), 55-67.
- Hasanah, U. (2020). Analisis Kesiapan Guru dalam Menghadapi Kurikulum Merdeka. Jurnal Pendidikan Modern, 5(3), 200-210.

Huda, M. (2021). Evaluasi Program Kurikulum dan Pembelajaran. Jakarta: Raja Grafindo Persada.

- Irawati, D. (2021). Kolaborasi Orang Tua dan Sekolah dalam Penerapan Merdeka Belajar. Jurnal Pendidikan Anak, 8(2), 77-88.
- Kementerian Pendidikan dan Kebudayaan. (2020). Capaian Pembelajaran Kurikulum Merdeka. Jakarta: Kemendikbud.
- Khairunnisa, A. (2021). Literasi Digital dalam Pembelajaran Merdeka Belajar. Jurnal Teknologi Pendidikan, 8(1), 32-40.
- Lestari, E. (2021). Peran Kepemimpinan Kepala Sekolah dalam Implementasi Kurikulum Merdeka. Jurnal Manajemen Pendidikan, 10(2), 90-102.
- Mahmud, M. (2021). Statistik Pendidikan. Bandung: Alfabeta.
- Marlina, S. (2022). Upaya Peningkatan Kompetensi Numerasi di Sekolah Dasar. Jurnal Inovasi Pembelajaran, 11(1), 55-64.
- Marzano, R. J. (2003). Classroom Instruction that Works: Research-Based Strategies for Increasing Student Achievement. Alexandria: ASCD.
- Mulyasa, E. (2020). Pengembangan Kurikulum di Era Merdeka Belajar. Bandung: Remaja Rosdakarya.
- Ningsih, L. (2021). Strategi Pembelajaran Adaptif dalam Kurikulum Merdeka. Jurnal Pendidikan Inklusif, 4(1), 20-29.
- Nurhadi. (2020). Literasi Baru di Era Merdeka Belajar. Jakarta: Prenada Media.
- OECD. (2019). PISA 2018 Results: Combined Executive Summaries. Paris: OECD Publishing.
- Putri, A. (2022). Penguatan Literasi Numerasi Melalui Proyek Profil Pelajar Pancasila. Jurnal Kurikulum Merdeka, 1(1), 15-25.
- Rahmawati, D. (2021). Kesiapan Infrastruktur dalam Implementasi Kurikulum Merdeka. Jurnal Kebijakan Pendidikan, 8(1), 45-54.
- Santrock, J. W. (2018). Educational Psychology. New York: McGraw-Hill Education.
- Sari, M. (2022). Dampak Kurikulum Merdeka pada Pembelajaran Numerasi. Jurnal Pendidikan Matematika, 16(2), 75-85.
- Slameto. (2019). Belajar dan Faktor-Faktor yang Mempengaruhinya. Jakarta: Rineka Cipta.
- Supriyadi, T. (2020). Manajemen Pendidikan di Era Merdeka Belajar. Bandung: Alfabeta.