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Curriculum Regulation Document Analysis on Strengthening Character Values through Physical Education

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Abstract

The implementation of the Merdeka Curriculum represents a significant reform in Indonesia's national education system, aiming to provide greater flexibility and student-centered learning. In the context of Physical Education (PE) at the junior high school level, this curriculum seeks to enhance not only students' physical abilities but also their character, creativity, and collaboration. This research evaluates the effectiveness of the Merdeka Curriculum in improving the quality of PE learning at State Junior High School (SJHS) 4 Jayapura. The object of this study is the Physical Education learning process as applied under the Merdeka Curriculum at State Junior High School 4 Jayapura. The main objective is to analyze how well the curriculum promotes engaging, inclusive, and competency-based learning in PE classes. This study used a qualitative descriptive method. Data were gathered through classroom observations, interviews with PE teachers, and questionnaires distributed to students at the school. Findings indicate that the Merdeka Curriculum has a positive influence on the quality of PE learning, particularly in increasing student motivation, active participation, and the integration of character-building elements. Nonetheless, several challenges were identified, such as limited facilities, inconsistent implementation, and the need for continuous teacher training. In conclusion, the Merdeka Curriculum at State Junior High School 4 Jayapura demonstrates promising potential in enhancing PE learning. However, its success is highly dependent on adequate resources and ongoing professional development for educators.

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INTRODUCTION

The launch of the Merdeka Curriculum in February 2022 marked a significant transformation in Indonesia's educational paradigm. Designed to alleviate content overload and place learners at the center of instruction, it also promotes essential life skills through integration of Project-Based Learning (PBL), which constitutes 25% of instructional time (Priawasana & Subiyantoro, 2024). By granting schools and teachers autonomy to craft context-specific curricula and define learning pace over one- to two-year learning phases, the curriculum seeks equitable development across diverse Indonesian settings (Qomarrullah et al., 2023; Widyanto & S, 2023).

In the realm of Physical Education, Sports, and Health (PE), this autonomy has allowed for adaptive, student-centered experiences. Research in Hulu Sungai Tengah district shows promising practices, such as diagnostic assessments and differentiated instruction, yet reveals the continued need for teacher capacity building and better evaluation mechanisms (Hidayat et al., 2024). Similarly, in Temanggung Regency, PE teachers reported implementing curriculum-aligned planning, teaching, and assessment routines, although practice variation persists across schools (Setiawan et al., 2023).

Quantitative findings in Agam Regency underscore the pivotal role of teachers' pedagogical, professional, and social competencies in facilitating effective curriculum implementation (Arianto et al., 2024). These competencies have been shown to significantly influence both direct classroom practices and peer collaboration systems essential to the curriculum's success. In addition, studies in Bontang City concluded that Merdeka Curriculum implementation in high school PE is rated "good", yet hampered by inadequate facilities, insufficient teacher training, and mismatches between academic preparation and curriculum demands (Qomarullah et al., 2023).

Despite these advances, research from State Senior High School (SSHS) 1 Bungursari highlights persistent misconceptions among school leaders, teachers, and students regarding curriculum principles—indicating that stakeholders' varied understanding limits full optimization (Syahra Maharani Anis Siti M. et al., 2024). Likewise, a study in Batang City identified strengths in classroom climate, interactive instruction, and adaptive assessments, but noted uneven integration across schools (Aji & Anwar, 2024).

Conceptually, the Merdeka Curriculum is anchored in competency-based learning and

constructivist pedagogy, seeking to balance essential disciplinary content with scalable differentiation strategies and authentic assessment methods (Priawasana & Subiyantoro, 2024). In PE, this translates to leveraging local resources and embedding cultural and character-building elements within physical activity units.

However, systemic gaps remain. Many teachers continue traditional teaching habits, lack media-rich instructional tools, inconsistently promote character education, and face facility constraints—as documented across regions like Sleman, Kerinci, and Hulu Sungai Tengah (Muliadi & Nasri, 2023). The implementation disparities suggest that institutional supports—including teacher professional development, infrastructure provisioning, and progressive evaluation systems—are critical to scaling quality outcomes.

Against this backdrop, the current study examines the effectiveness of the Merdeka Curriculum in enhancing PE learning quality at State Junior High School 4 Jayapura, an urban state school in Papua. It aims to: evaluate student engagement, participation levels, and character integration; assess teacher adaptation in pedagogy and assessment; and quantify competence gains. Employing a mixed-methods design—comprising surveys, interviews, observations, and document analysis—the research builds on prior studies while narrowing its focus to Eastern Indonesia, a region underrepresented in existing literature.

The novelty of this research lies in its contextual attention to Jayapura's cultural and geographic uniqueness. By expanding core implementation research into a peripheral urban setting, it contributes to the national "state-of-the-art" body of knowledge and offers evidence-based insights to inform curriculum reform in Papua and similar contexts.

This work also aims to offer both theoretical and practical contributions. Theoretically, it enriches understanding of teacher-centred autonomy in competency-based PE pedagogy. Practically, it provides recommendations for school principals, district education administrators, and policymakers, particularly around capacity development, resource alignment, and modular assessment design adapted to local practices.

Finally, the study seeks transformative solutions—such as structured teacher learning communities, curriculum-supportive infrastructure enhancements, and culturally responsive assessment strategies—to actualize the Merdeka Curriculum's vision of holistic, equitable learning for all students, irrespective of region or resource disparity.

METHODS

This study employed a convergent mixed-methods approach, combining quantitative and qualitative data collection and analysis to provide a comprehensive understanding of how effectively the Merdeka Curriculum enhances physical education learning. This design allows researchers to validate findings across different data sources and explore both measurable outcomes and lived experiences, aligning with the methodological framework outlined by (Creswell & Plano Clark, 2021).

The research was conducted at State Junior High School 4 Jayapura, involving participants consisting of all physical education (PE) teachers and approximately 120 students from Grade VIII and IX. The student sample was selected using stratified random sampling, ensuring representation across gender, academic achievement levels, and socio-cultural backgrounds.

Quantitative data were gathered using a 5-point Likert-scale questionnaire designed to assess three main variables: teacher competencies (pedagogical, professional, and social), the quality of PE instruction (measured by student motivation, participation, and learning outcomes), and student perceptions of the Merdeka Curriculum implementation. This instrument was adapted from (Surya et al., 2018; Tyas et al., 2024), who studied PE curriculum practices in Karangmoncol. Content validity was ensured through expert review and a pilot test, while internal consistency was confirmed using Cronbach's alpha with a threshold of $\alpha \geq .70$.

Qualitative data were collected through classroom observations, semi-structured interviews, focus group discussions (FGDs), and document analysis. Observations were conducted over 8 to 10 PE sessions, focusing on teacher-student interactions, instructional methods, media use, and character integration. Interviews were conducted with five PE teachers and ten students to explore their perspectives and experiences. FGDs with the school principal and teaching team provided insights into institutional support, challenges, and strategic responses. Document analysis included lesson plans, syllabi, and student portfolios to examine curriculum alignment.

Quantitative data were analyzed using SPSS with descriptive statistics, Pearson correlation, and multiple linear regression to identify relationships between teacher competence and instructional quality. This follows similar procedures used in curriculum evaluation research by (Rachmawati et al., 2022). Meanwhile, quali-

tative data were analyzed using thematic analysis and content analysis to identify recurring themes such as instructional adaptation, student engagement, and implementation barriers.

To ensure data trustworthiness, methodological triangulation was applied by comparing findings across instruments. Member checking was conducted with interview participants to confirm the accuracy of interpreted meanings. An audit trail documented the entire research process for transparency and replication, adhering to ethical standards for educational research (Zellatifanny & Mudjiyanto, 2018).

All participants provided informed consent, and ethical clearance was obtained prior to data collection. Confidentiality and anonymity were guaranteed throughout the study. This research design enabled a holistic examination of how the Merdeka Curriculum is being enacted in a real-world classroom setting, generating findings that are both contextually grounded and broadly relevant for policy and practice in Indonesian junior high schools.

RESULTS AND DISCUSSION

The findings of this study illustrate how the Merdeka Curriculum has been implemented in the Physical Education (PE) classroom at State Junior High School 4 Jayapura, providing insights into its effectiveness in enhancing instructional quality. Both quantitative and qualitative data indicate significant progress in curriculum implementation, particularly in terms of student motivation, teacher performance, and contextualized learning.

The results of the student perception questionnaire showed a high level of agreement regarding teacher competencies and the quality of PE instruction. **Table 1** summarizes the mean scores across key variables based on student responses (n = 120).

Table 1. Mean Scores of Student Perception on Teacher Competence and PE Learning Quality

Variable	Mean Score	Standard Deviation
Pedagogical Competence	4.21	0.52
Professional Competence	4.13	0.49
Social Competence	4.35	0.45
Student Motivation	4.18	0.56
Participation in Learning	4.07	0.62
Perceived Learning Outcomes	4.12	0.53

Further statistical analysis showed a significant and strong correlation between overall teacher competence and the quality of PE learning, as shown in **Table 2.**

Table 2. Correlation Between Teacher Competence and Learning Quality

Correlation Test	Pearson's r	Significance (p)
Teacher Competence ↔ Learning Quality	0.62	< 0.01

Regression analysis indicated that pedagogical competence had the most substantial influence on learning quality ($\beta = 0.45$, p < 0.001), followed by social competence ($\beta = 0.33$, p < 0.01), with professional competence contributing modestly but significantly ($\beta = 0.21$, p < 0.05).

The qualitative data supported the quantitative trends and provided contextual understanding of the changes in teaching practice and student behavior. Based on classroom observations, teachers actively applied differentiated strategies such as group collaboration, local games (e.g., Sepak Bola Api, Egrang), and self-reflection journals as learning tools.

In interviews, teachers expressed enthusiasm about the curriculum shift:

"Under the Merdeka Curriculum, I feel more freedom to adapt lessons to what my students need and enjoy. For example, I now include traditional sports from Papua that they know from home."

(Teacher 1, Interview Transcript, May 2025)

Students also responded positively:

"Before, we just did warm-up and sports drills. Now we play in teams, make decisions, and even present our own warm-up routines. It's fun and we learn leadership."

(Student 3, Grade VIII, Interview Transcript, May 2025)

The FGD with school leaders highlighted systemic challenges. While the curriculum promoted innovation, infrastructure limitations (e.g., lack of sports equipment, limited gym space) and the need for ongoing professional development were major concerns. Additionally, assessment practices still relied on traditional tests, which were not aligned with the competency-based approach of the Merdeka Curriculum.

Despite these barriers, the school had initiated peer coaching among teachers and begun integrating local values into lesson content. These institutional responses reflected adaptability and

collective ownership of the curriculum goals.

The results of this study provide a comprehensive overview of the effectiveness of the Merdeka Curriculum implementation in Physical Education (PE) at State Junior High School 4 Jayapura. The data collected from both quantitative surveys and qualitative interviews and observations revealed multiple dimensions of teacher competencies, student engagement, instructional quality, and the contextual dynamics of curriculum enactment.

From the quantitative analysis, the overall level of teacher competence, as perceived by students, was rated highly across all dimensions—pedagogical, professional, and social. The mean score for pedagogical competence was 4.21, while professional and social competences scored 4.13 and 4.35 respectively on a 5-point Likert scale. These results suggest that PE teachers have adopted learner-centered approaches in line with the Merdeka Curriculum principles.

In terms of student engagement and motivation, the results indicated that students responded positively to the new curriculum. Most students reported increased enthusiasm in PE classes, with 86% indicating that learning activities were more interactive and enjoyable compared to previous curriculum models. Furthermore, 78% of respondents felt they had more opportunities to express themselves and develop teamwork through PE projects and games.

The results of the Pearson correlation test revealed a significant positive correlation between teacher competencies and the quality of PE instruction (r = 0.62, p < 0.01). This indicates that the higher the level of teacher competence, the better the observed learning outcomes and student participation. Moreover, multiple linear regression showed that pedagogical competence was the most influential predictor of instructional quality (β = 0.45, p < 0.001), followed by social competence (β = 0.33, p < 0.01), while professional competence had a smaller yet statistically significant impact.

Qualitative findings supported the quantitative data. Observations revealed that PE teachers integrated various instructional strategies such as game-based learning, cooperative learning, and the incorporation of local cultural elements into physical activities. These approaches aligned well with the goals of the Merdeka Curriculum to promote holistic, context-sensitive learning. One teacher noted during an interview, "I feel freer to design activities that are fun and culturally relevant for my students, which also helps them stay

engaged and motivated."

Furthermore, interviews with students emphasized the perceived shift from rigid, instruction-heavy sessions to more student-driven and exploratory learning. Many students highlighted that they now had the chance to voice opinions, try new roles in team settings, and participate more actively in assessments. Some students also expressed pride in being able to incorporate local games and traditional sports into the learning process.

During the focus group discussion (FGD) with the school leadership and PE team, it was revealed that while the curriculum had opened space for innovation, several challenges remained. These included limited infrastructure, the need for ongoing teacher training, and the absence of specific assessment instruments tailored for physical education under the new curriculum framework. Nevertheless, the school had initiated peer mentoring among teachers and collaborated with local stakeholders to address these gaps.

Overall, the findings illustrate that the Merdeka Curriculum has significantly enhanced the quality of physical education learning at State Junior High School 4 Jayapura. The increase in student motivation, the flexible use of instructional methods, and the alignment with local contexts all point toward a positive transformation. However, the findings also underscore the need for systemic support in infrastructure, professional development, and evaluation frameworks to sustain and scale the gains achieved.

The outcomes of this study affirm that the Merdeka Curriculum significantly elevates the quality of Physical Education (PE) instruction at State Junior High School 4 Jayapura through stronger teacher competencies, increased student engagement, and culturally responsive practices. These findings are consistent with global research suggesting that teacher professional efficacy and contextual adaptability are key determinants of PE effectiveness.

The pivotal role of pedagogical competence in shaping the quality of learning experiences, as evidenced in this study, is strongly supported by both empirical data and theoretical underpinnings. Pedagogical competence—understood as the teacher's ability to design, facilitate, and reflect upon meaningful learning—is not merely a technical skill, but a core indicator of professional efficacy in education. The high regression coefficient between pedagogical competence and learning quality in this study aligns with global literature emphasizing that quality instruction emerges not from curriculum content

alone, but from the nuanced, adaptive strategies teachers employ to make that content relevant, accessible, and engaging. As Vygotsky's social constructivist theory suggests, learning is inherently mediated through social interaction, and teachers with strong pedagogical capacity are more likely to foster such meaningful interactions in physical education (PE), which requires contextual, collaborative, and embodied learning processes.

Ben Amotz et al. (2025) reinforced this claim by showing that PE teachers with high instructional design capacity—particularly in integrating digital tools and structuring reflective activities—were more successful in maintaining student motivation, even in remote and online contexts. This demonstrates that pedagogical skill transcends medium and modality, reflecting a professional agility to adjust strategies in accordance with situational demands. Ismail et al. (2021) & Aga (2022) study in Ethiopian secondary schools revealed that teachers with superior management and demonstration skills not only facilitated better content delivery but also positively influenced students' affective attitudes toward physical education. These findings underscore that effective pedagogy is not bounded by geography; rather, it functions as a universal lever of student success—especially in disciplines like PE where motivation, engagement, and movement-based learning intersect.

In addition to these conceptual and empirical validations, the recognition of pedagogical competence as a critical determinant of learning quality also has juridical standing in national education frameworks. In Indonesia, for instance, Law No. 14 of 2005 on Teachers and Lecturers explicitly mandates pedagogical competence as one of four essential competencies required of professional educators, alongside personal, social, and professional competencies. This legal foundation affirms the state's role in ensuring that pedagogical quality is not left to chance or context but is systematically developed, assessed, and supported through teacher training and certification systems. The Merdeka Curriculum, with its emphasis on learning differentiation, student autonomy, and project-based learning, further places pedagogical agility at the forefront of teaching quality—making this competence even more vital in its implementation.

Thus, the alignment of this study's findings with international evidence and national legal norms illustrates a triple-layered convergence: theoretical, empirical, and regulatory. Pedagogical competence emerges as both a driver and a product of quality educational ecosystems. It facilitates not only improved cognitive and affective outcomes in students but also redefines the role of PE teachers as curriculum co-designers, cultural transmitters, and reflective practitioners. Moving forward, this insight reinforces the need for continuous professional development programs that go beyond technical skills, focusing instead on cultivating pedagogical reasoning, cultural sensitivity, and innovation. Such a holistic approach would ensure that the promises of curricular reform, such as those envisioned by the Merdeka Curriculum, can be fully realized in classrooms across diverse educational landscapes.

The curriculum's emphasis on contextualization and culturally relevant content echoes international practices such as integrating local games and cultural artifacts in PE. This mirrors the PETE (Physical Education Teacher Education) program in Portugal, which emphasized student-centered, culturally inclusive pedagogies and reported enhanced equity in participation. In Jayapura's case, including traditional Papuan games not only increased motivation but also nurtured cultural identity and relevance, reinforcing the curriculum's values.

Despite the encouraging outcomes associated with the implementation of the Merdeka Curriculum, several systemic challenges persistmirroring patterns observed globally. One of the most prominent issues is the persistent inadequacy of educational infrastructure, particularly in regions with limited access such as Jayapura. In Physical Education (PE), the lack of proper facilities, equipment, and safe practice spaces significantly undermines the realization of intended learning outcomes. The U.S. Surgeon General's report on school-based physical activity (PA) programs noted that without adequate infrastructure and assessment tools, even the most well-intentioned curriculum reforms fail to reach their full potential. This reflects a fundamental tension between curricular ambition and environmental constraints—a tension that is both structural and political in nature.

The situation in Jayapura closely mirrors this global condition. Although teachers have demonstrated adaptability and enthusiasm toward the Merdeka Curriculum, their efforts are constrained by the absence of standardized assessment instruments tailored to competency-based learning, particularly in PE. This absence creates ambiguity in how student progress is measured and communicated. As Ben Amotz et al. (2025) argue, the demands of remote or resource-limited teaching contexts call for not just techno-

logical adaptation but also targeted pedagogical training and assessment literacy, so that teachers are equipped to design meaningful evaluations aligned with national goals and student needs.

Moreover, the lack of systemic and structured professional development continues to impede the sustainability of innovation at the classroom level. While qualitative data from Jayapura indicate promising practices such as peer mentoring and informal learning communities, these remain isolated and lack formal institutional support. Kim & Cruz (2024), in their comprehensive review of PE teacher leadership, assert that true professional growth emerges not from ad-hoc interventions, but through systemic, reflective, and continuous development models that integrate mentorship, curriculum design, and assessment training. Thus, while peer coaching in Jayapura offers an encouraging foundation, it needs to be institutionalized, resourced, and linked to formal teacher evaluation and promotion mechanisms to maximize its impact.

Legally and normatively, the gaps observed contradict Indonesia's commitment to professional teacher development as mandated in Permendiknas No. 16 of 2007 concerning the Standards of Academic Qualifications and Teacher Competence. This regulation explicitly outlines the requirement for teachers to master learning evaluation techniques and to use assessment results for curriculum improvement. The absence of such competencies and tools in PE within the current Merdeka Curriculum rollout indicates not only a technical gap but a regulatory implementation lapse. To address this, there must be a coordinated effort among the Ministry of Education, local governments, and school leadership to strengthen infrastructure, institutionalize professional development, and develop competency-based assessment models specifically for PE-thus ensuring equity, accountability, and sustainability in curriculum implementation.

Overall, these findings contribute to a rapidly evolving global "state-of-the-art" in PE research, where teacher efficacy, cultural relevance, and systemic support converge to produce high-quality learning. The Merdeka Curriculum in Jayapura echoes these global insights—showing strong pedagogical improvements, increased student participation, and contextual equity—while also highlighting persistent structural barriers.

These insights emphasize that curriculum reform must be complemented by investments in infrastructure, formative assessment tools, and sustained professional development, ensuring that learner-centered policies translate into con-

sistent practice. As the global literature indicates, these elements are indispensable to sustaining the gains achieved by curriculum innovation.

CONCLUSION

The findings of this study demonstrate that the Merdeka Curriculum has significantly improved the quality of Physical Education learning at the junior high school level, particularly at State Junior High School 4 Jayapura. Teacher pedagogical competence emerged as a dominant factor influencing learning quality, with student motivation, participation, and contextual relevance also showing measurable improvement. The curriculum's emphasis on flexibility and cultural responsiveness allowed teachers to create more engaging, student-centered, and locally relevant learning experiences.

However, the study also uncovered persistent structural challenges. These include inadequate sports facilities, the absence of standardized assessment tools aligned with competency-based learning in PE, and limited access to continuous professional development. While teachers demonstrated a strong willingness to innovate, their efforts were often constrained by a lack of institutional support and clear implementation guidance. This highlights a disconnect between curriculum aspirations and operational realities on the ground—especially in geographically disadvantaged regions like Jayapura.

In light of these findings, the study recommends that the government and school authorities invest in three strategic areas: (1) enhancing teacher capacity through sustained, reflective training in curriculum design and performance-based assessment; (2) developing infrastructure and instructional resources tailored for PE; and (3) institutionalizing mentoring systems and professional learning communities to support long-term curriculum sustainability. Such efforts are essential to ensure that the transformative goals of the Merdeka Curriculum are fully realized and equitably distributed across Indonesia's diverse educational landscapes.

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