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Influence of teacher expertise, motivation, and self-beliefs learning outcomes: a literature review

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ABSTRACT

This literature review synthesizes empirical evidence on how teacher expertise, student learning motivation, and self-beliefs influence learning outcomes in elementary school Physical Education. A systematic search of open-access national and international studies published between 2017 and 2025 was conducted using multiple databases with keywords related to teacher competence, motivation, self-efficacy, and learning outcomes. The findings indicate that teacher expertise, encompassing pedagogical knowledge, instructional clarity, and effective feedback, serves as a foundational determinant of student engagement and motor skill development. Learning motivation, particularly intrinsic motivation, acts as a mediating factor that enhances persistence and active participation in Physical Education activities. Self-beliefs, including self-efficacy and perceived competence, consistently predict task engagement and adaptive responses to challenges. The review highlights the interplay of pedagogical quality and psychological readiness as a holistic framework for improving learning outcomes, emphasizing the need for teacher development programs and intervention-based studies to strengthen motivation and self-beliefs in students.

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Introduction

Physical Education, Sports, and Health instruction is expected to provide comprehensive learning experiences that support motor skill development, health literacy, and students' cognitive and affective growth. In this ideal scenario, teachers of Physical Education, Sports, and Health act as skilled facilitators who combine pedagogical knowledge, technical expertise, and classroom management to design safe and challenging activities that foster student motivation and self-beliefs (Boihaqi et al., 2025; Qadafi, 2025). International research emphasizes that teacher competence and autonomy-supportive teaching strategies play a crucial role in enhancing student engagement and learning outcomes across diverse cultural contexts (K. Han, 2021; Siacor et al., 2024; Yang et al., 2022). Cross-cultural studies show that teaching practices and teacher support influence both motivation and

Physical Education outcomes in various countries (Doren et al., 2021; Shen et al., 2022; Soos et al., 2019).

In practice, however, there remains a gap between these ideals and everyday instruction. Studies in Indonesia report that some Physical Education, Sports, and Health teachers still struggle with pedagogical and professional competence, particularly older teachers who face challenges adapting to curriculum changes and innovative instructional approaches, often leading to the neglect of non-motor domains such as motivation, self-efficacy, and affective development (Anggara, 2020; Hermawan, 2021; Maizan et al., 2022). Research also shows considerable variation in students' motivation levels and low physical self-confidence, which negatively affect participation and learning outcomes in Physical Education, Sports, and Health classes (Mubarok et al., 2022; Oktadinata et al., 2023; Welis et al., 2024). Instructional approaches that focus solely on technical skills without supporting psychological and motivational factors exacerbate these challenges.

International and national evidence consistently demonstrates that students' self-beliefs and the quality of teacher support are strong predictors of engagement and achievement in Physical Education. For example, attitudes and self-efficacy of teachers influence the implementation of inclusive and adaptive teaching strategies, which subsequently shape student outcomes (Aalto et al., 2024; Gülsün et al., 2023; Jerrim et al., 2025). Similarly, interventions in Indonesia aimed at fostering self-efficacy have been shown to increase students' physical activity levels, motivation, and satisfaction with learning (Oktadinata et al., 2023; Prabowo et al., 2025). These findings suggest that improving Physical Education, Sports, and Health learning outcomes requires not only enhancing teachers' technical skills but also cultivating learning environments that intentionally build student motivation and self-beliefs.

Recent studies recommend practical strategies, including professional development programs to strengthen teacher competence, implementing autonomy-supportive instructional models such as Sport Education, and integrating psychological interventions such as modeling, meaningful feedback, and gradual goal-setting to enhance self-efficacy. Cross-cultural evidence further emphasizes that motivational strategies must be tailored to school culture to be effective (Shen et al., 2022). Therefore, enhancing teacher expertise, fostering learning motivation, and supporting positive self-beliefs are critical priorities for improving the quality of Physical Education, Sports, and Health and promoting lifelong physical activity.

This literature review aims to synthesize empirical findings from 2017 to 2025 regarding the influence of teacher competence, learning motivation, and self-beliefs on learning outcomes in elementary school Physical Education, Sports, and Health, with particular attention to the Indonesian context and comparisons to international trends. The novelty of this study lies in its integration of teacher expertise, student motivation, and self-beliefs into a single analytical framework, which has often been addressed only partially in previous research. Additionally, this review identifies methodological gaps, such as limited longitudinal designs and small elementary-level samples, and proposes future research agendas involving longitudinal and experimental approaches. Specifically, this review seeks to: (1) synthesize evidence on how teacher competence, motivation, and self-beliefs influence learning outcomes, (2) map the interactions among these variables, and (3) offer practical recommendations for teacher training and evidence-based curriculum design. Ultimately, the study presents an updated integrative framework that links pedagogical and psychological determinants as concurrent influences on Physical Education, Sports, and Health learning outcomes at the elementary level.

Method

This study employed a literature review approach to systematically identify, evaluate, and synthesize empirical findings on the influence of teacher expertise, student learning motivation, and self-beliefs on learning outcomes in elementary school Physical Education, Sports, and Health. This method was chosen to provide a comprehensive overview of the patterns of relationships among these variables and to identify research gaps that have not been widely explored. The review prioritized transparency and replicability, ensuring that the processes of searching, selecting, and analyzing articles were conducted in a structured and clearly documented manner.

The literature search was conducted using multiple scientific databases, including Google Scholar, ERIC, Scopus, DOAJ, and ScienceDirect. Keywords were combined strategically, including "teacher expertise," "Physical Education learning," "learning outcomes," "student motivation," "self-efficacy," and "self-beliefs." The search focused on studies published between 2017 and 2025 to reflect current research trends. Articles were initially screened based on relevance of titles and abstracts, followed by a full-text review to ensure alignment with the review objectives.

Inclusion criteria required studies to be empirical, peer-reviewed, and written in English or Indonesian, explicitly addressing teacher competence, learning motivation, or self-beliefs in the context of elementary school Physical Education, Sports, and Health. Both quantitative, qualitative, and mixed-methods studies, as well as review articles relevant to the core variables, were considered. Exclusion criteria included studies outside the scope of Physical Education, non-peer-reviewed publications, and articles unavailable in full text.

Articles meeting the criteria were analyzed using thematic analysis to identify patterns, relationships among variables, and instructional implications. Each article was coded for themes such as teacher competence, motivational strategies, self-beliefs, and learning outcomes. The synthesis focused on highlighting consistent findings, variations across contexts, methodological strengths and weaknesses, and areas for future research. By combining national and international evidence, this approach allows for a nuanced interpretation of how teacher expertise, motivation, and self-beliefs interact to influence learning outcomes in elementary school Physical Education, Sports, and Health.

Results and Discussions

The results of the literature review indicate that physical education learning outcomes are influenced by a combination of teacher-related and student-related factors. Teachers with strong pedagogical expertise, clear instructional skills, and the ability to provide effective feedback were found to enhance student engagement and motor skill development. In addition, learning motivation, particularly intrinsic motivation, serves as a mediating factor that promotes persistence and active participation in physical education activities. Student self-beliefs, such as self-efficacy and perceived competence, also emerged as strong predictors of task engagement and adaptive responses to learning challenges. These findings highlight the importance of the interaction between teaching quality, motivation, and students' self-beliefs in creating a supportive learning environment that improves physical education outcomes in primary education.

Table 1. Articles Used in the Literature Review (2018–2025).

Article Code	Authors (Year)	Scope	Keywords	Research Findings
LR1	Hutzler et al. (2019)	International	teacher attitudes, self-efficacy, inclusion	Teachers' competence and self-efficacy in PE influence instructional quality and student participation.
LR2	Shen et al. (2022)	International	motivation, PE, cross-cultural	Teacher support enhances students' intrinsic motivation and PE learning outcomes across countries.
LR3	Zhou et al. (2021)	International	feedback, motor skill learning, school-based PE	A systematic review showing that feedback interventions significantly improve students' motor skill learning compared to no-feedback conditions.
LR4	Han et al. (2022)	International	feedback effects, motor learning, meta-analysis	Visual, corrective, and combined feedback are proven effective in improving motor learning, highlighting the importance of teacher feedback in PE.

Article Code	Authors (Year)	Scope	Keywords	Research Findings
LR5	Johnson et al. (2017)			
LR6	Baumgartner (2022)	International	instruction, teacher feedback, motivational climate	Explicit instruction and feedback within a mastery motivational climate enhance students' motor skill acquisition.
LR7	Oktadinata et al. (2023)	National	teacher professional competence, classroom practice	Demonstrates that teacher competence goes beyond knowledge and requires real classroom performance and pedagogical skill.
LR8	Marlina et al. (2021)	National	self-efficacy, motivation, sport satisfaction	Self-efficacy influences students' learning satisfaction, physical motivation, and participation.
LR9	Anwar et al. (2020)	National	teacher competence, student motivation, learning outcomes	Teacher competence and student motivation significantly affect learning outcomes.
LR10	Rohmansyah et al. (2022)	National	teacher competencies, PE learning achievement	PE teacher competence significantly contributes to students' learning achievement.
LR11	Hasani et al. (2019)	National	teaching style, motivation, physical education	Teaching style influences students' affective and cognitive motivation in PE.
LR12	Pratama et al. (2024)	National	learning model, motivation level, self-efficacy	The interaction between learning models and motivation levels affects students' self-efficacy in PE. Self-efficacy is positively associated with PE learning outcomes in elementary school students.

The synthesis of twelve national and international articles reveals consistent patterns regarding the influence of teacher competence, learning motivation, and self- beliefs on physical education learning outcomes. Each study provides a unique yet complementary perspective, covering aspects such as instructional quality, feedback practices, teaching styles, and psychological factors including self-perception and confidence. Overall, the literature shows that teacher competence is a fundamental determinant of instructional effectiveness, while motivation and self-beliefs serve as psychological mechanisms that strengthen its impact on student learning. The findings also indicate that students' self-beliefs are among the most consistent predictors of motor skill success and willingness to attempt new tasks. Collectively, the synthesis reinforces the importance of the interaction between pedagogical and psychological factors in producing optimal learning outcomes in PE.

The data in Table 2 indicate that the quality of PE learning is strongly influenced by teachers' ability to provide clear instruction, effective feedback, and supportive classroom management that meets students' needs. Consistent findings show that teacher competence forms the foundation of learning effectiveness, but its impact is significantly shaped by students' psychological conditions. Motivation and self-beliefs emerge as mediating variables that can strengthen or weaken the effect of teacher competence (Kristensen et al., 2023; Trusz, 2018). Hence, even well-delivered instruction will not yield optimal outcomes without internal motivation and positive self-perception among students. The

literature also highlights that the development of self-beliefs is strongly influenced by the quality of teacher feedback and students' motor success experiences. These findings affirm the necessity of a holistic pedagogical approach in which instructional strategies and psychological support operate simultaneously.

Table 2. Synthesis of Key Findings from the Reviewed LiteratureTable 2. Synthesis of Key Findings from the Reviewed Literature

Variable	Key Findings	Sources
Teacher expertise	High teacher competence results in effective instruction, high-quality feedback, optimal classroom management, and significant improvements in motor skill performance.	LR1; LR3; LR4; LR5; LR6; LR8; LR9
Learning motivation	Intrinsic motivation enhances student participation, persistence, effort, and engagement in PE learning.	LR2; LR10; LR11
Self-beliefs	Self-efficacy and perceived competence influence students' willingness to attempt new tasks, persistence in facing difficulties, and motor performance, thereby shaping learning outcomes.	LR7; LR12
Integrated findings	The integration of teacher competence, motivational support, and positive self-beliefs creates meaningful learning experiences and improves PE learning outcomes.	LR2; LR4; LR5

The synthesis of the reviewed literature consistently indicates that teacher competence is a fundamental determinant of learning outcomes in Physical Education, Sports, and Health. Studies by Johnson et al. (2017) and Matsuura et al. (2025) demonstrate that explicit instruction and structured feedback delivered within a supportive motivational climate significantly enhance students' motor skill acquisition. These findings are reinforced by the meta-analysis of Han (2022), which shows that various forms of teacher feedback, including visual, corrective, and combined feedback, produce meaningful improvements in motor performance. Importantly, Baumgartner (2022) emphasizes that teacher professional competence extends beyond theoretical understanding and requires adaptive pedagogical performance in real classroom contexts. National evidence further supports this conclusion, as Anwar et al. (2020) and Marlina et al. (2021) found that teacher competence contributes significantly to student achievement in Physical Education, Sports, and Health, particularly when instructional practices are aligned with students' developmental needs.

Learning motivation emerges as a critical psychological mechanism that strengthens the impact of teacher competence on learning outcomes. International findings by Shen et al. (2022) highlight that autonomy-supportive teaching practices foster intrinsic motivation across cultural contexts, thereby enhancing student engagement and persistence. National studies echo these results, with Rohmansyah et al. (2022) showing that teaching styles directly influence students' affective and cognitive motivation, while Hasani et al. (2019) demonstrate that instructional models interact with students' motivation levels to shape self-efficacy. These findings suggest that even high-quality instruction may not yield optimal outcomes when students' motivational needs are not adequately addressed.

Students' self-beliefs, particularly self-efficacy and perceived competence, are consistently identified as strong predictors of engagement and performance in Physical Education, Sports, and Health. Oktadinata et al. (2023) found that self-efficacy significantly influences learning satisfaction and physical motivation, while Pratama et al. (2024) reported a positive association between self-efficacy and learning outcomes among elementary school students. International evidence similarly indicates that self-beliefs influence effort, persistence, and adaptive responses to learning challenges. These findings suggest that self-beliefs function not only as outcomes of effective instruction but also as mediating factors that shape how students respond to learning tasks.

The integration of teacher competence, learning motivation, and self-beliefs appears to represent the most effective framework for understanding variations in learning outcomes. Studies by Shen et al. (2022) and Zhou et al. (2021) highlight that strong instruction must be accompanied by motivational support and constructive feedback to foster positive self-perceptions and sustained engagement. The novelty of this literature review lies in synthesizing these three domains into a unified analytical

framework within the Indonesian elementary school context, where previous research has often examined these variables in isolation.

Despite the overall consistency of findings, the reviewed studies exhibit notable methodological variation that warrants critical consideration. Differences in sample size, research design, and operationalization of key constructs limit direct comparison across studies. For instance, motivation and self-efficacy are measured using diverse instruments, and the mediating role of motivation is not consistently supported across contexts. These inconsistencies suggest that contextual factors such as school culture, instructional models, and autonomy-supportive environments may moderate the strength of observed relationships.

The findings can be interpreted through several established theoretical frameworks. Self-Determination Theory explains how autonomy-supportive teacher behaviors satisfy students' psychological needs and foster intrinsic motivation (Behzadnia et al., 2018; Guo et al., 2025; Leo et al., 2020). Social Cognitive Theory clarifies why self-efficacy and perceived competence are central to persistence and performance in Physical Education learning (Ghazi et al., 2018; X. Han, 2025; Li et al., 2020). In addition, the emphasis on teacher competence aligns with the Pedagogical Content Knowledge framework, which underscores the integration of pedagogical skill, subject-matter expertise, and contextual understanding in effective instruction (Backman et al., 2020; Mafa-theledi, 2024; Seldura et al., 2024; Ward & Kim, 2024).

Taken together, the evidence supports an integrative perspective in which pedagogical quality and psychological readiness operate simultaneously to shape learning outcomes. Practically, these findings highlight the need for teacher development programs that address instructional expertise, autonomy-supportive practices, and strategies to strengthen students' self-beliefs. Nevertheless, methodological gaps remain, particularly the limited use of longitudinal designs, the reliance on self-report measures, and the scarcity of experimental and mixed-methods studies in the Indonesian elementary school context. Addressing these limitations will be essential for advancing a more robust and context-sensitive understanding of Physical Education, Sports, and Health learning outcomes.

Conclusions

The findings of this literature review indicate that teacher competence, learning motivation, and self-beliefs are three interrelated factors that collectively form the foundational basis for achieving physical education learning outcomes at the elementary school level. Teacher competence functions as the primary driver of instructional effectiveness, while motivation and self-beliefs act as psychological mechanisms that strengthen the instructional impact on student success. The synthesis of national and international studies highlights that the combination of high-quality pedagogical approaches, well-designed motivational strategies, and the reinforcement of students' self-perceptions can create more meaningful and sustainable learning experiences in physical education. However, this review has limitations, as it relies solely on open-access studies and does not incorporate in-depth methodological analyses of each article. Therefore, future research is encouraged to develop a more comprehensive conceptual model through meta-analytic techniques or empirical investigations that examine the simultaneous contribution of these three variables within the Indonesian elementary school context.

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