



Implementing Inclusive Physical Education in Public Secondary Schools: Teachers' Attitudes, Pedagogical Practices, and Institutional Constraints in a Cross-Sectional Study

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Abstract

Inclusive physical education (IPE) in public secondary schools is vital for ensuring that students of all abilities can participate meaningfully, build physical literacy, and benefit socially and emotionally from school sport and movement activities. This cross-sectional study explored how physical education teachers view inclusion, what they do in practice, and which school-level factors help or hinder IPE implementation. Teachers from urban and peri-urban public secondary schools participated through structured questionnaires, while classroom practices were further examined using semi-structured observations. Data were analysed using descriptive statistics and multivariate techniques to understand how teacher characteristics, attitudes, teaching approaches, and institutional constraints relate to one another. Overall, most teachers expressed positive attitudes toward IPE and recognised its educational and social value. However, inclusion was not consistently implemented. Teachers reported using strategies such as modifying tasks, cooperative learning, peer-assisted instruction, and differentiated assessment, but these practices were applied irregularly and often depended on individual effort rather than structured school support. Teachers who had previous training in adapted physical education or inclusive pedagogy showed higher confidence and used inclusive methods more frequently. In contrast, mixed or negative attitudes were commonly linked to workload stress and the feeling that the school system did not support inclusion. Several institutional barriers were repeatedly identified, including large class sizes, limited facilities and adapted equipment, rigid curricula, inadequate professional development, weak policy enforcement, and insufficient time within school timetables. Competitive assessment systems also restricted inclusive teaching by prioritising performance over participation. Classroom observations reinforced these findings, showing a clear gap between teachers' inclusive intentions and what was actually delivered. Still, some teachers demonstrated creative, low-cost adaptations, suggesting that effective inclusion is achievable when flexibility and administrative support exist. The study concludes that positive attitudes alone are not enough; sustained training, curriculum adjustments, resources, and strong school leadership are essential for meaningful inclusive physical education.

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1. Introduction

Inclusive physical education has become a central expectation of modern schooling because it speaks directly to equity, social justice, and the right of every learner to take part meaningfully in school life. In public secondary schools, physical education holds a special place in the curriculum: it is one of the few subjects that simultaneously nurtures physical development, thinking skills, teamwork, communication, and emotional growth. Yet for students with disabilities and other diverse learning needs, access to high-quality, meaningful physical education is still inconsistent, especially in public school systems where resources

are stretched. As secondary schools continue to serve increasingly diverse student populations, the push to implement inclusive physical education has grown stronger among educators, policymakers, and international education and health stakeholders (Forrester *et al.*, 2018; Lall *et al.*, 2019). The case for inclusive physical education is rooted in a simple but important idea: movement and physical activity are not optional extras in adolescence they are essential for healthy development and social participation. Inclusive physical education aims to ensure that all students, regardless of ability, gender, or health status, can participate in age-appropriate activities that build fitness, confidence, and emotional well-being. A descriptive cross-sectional design was used to examine how inclusive physical education is being implemented in public secondary schools, focusing on teachers' attitudes, what they do in practice, and the institutional factors that shape inclusion. This approach was suitable because it allows data to be gathered from a defined group at one point in time, giving a clear picture of current perceptions, classroom practices, and school-level conditions affecting inclusive physical education.

The study involved physical education teachers working in public secondary schools. A multistage sampling method was adopted to achieve fair representation across schools. First, public secondary schools within the study area were randomly selected. Next, all eligible physical education teachers in the selected schools were invited to participate. This method helped broaden coverage and reduce selection bias. Teachers were included if they were employed full-time and actively involved in teaching physical education at the secondary level.

Data were collected using a structured self-administered questionnaire designed from established literature on inclusive education, physical education pedagogy, and

teacher attitudes. The questionnaire covered four main areas: teachers' background characteristics, attitudes toward inclusive physical education, inclusive teaching practices, and perceived institutional constraints such as large class size, limited facilities and equipment, administrative support, and access to professional development. Responses were captured using Likert-type scales to reflect levels of agreement and frequency. To strengthen the instrument, specialists in human kinetics, inclusive education, and educational measurement reviewed it for content validity. A pilot study was also conducted to improve clarity and layout, and internal consistency was assessed using Cronbach's alpha.

Ethical approval was obtained from the appropriate review body, and formal permission was secured from school authorities. Participation was voluntary, informed consent was obtained from all respondents, and confidentiality was protected through anonymous responses and secure data handling. Data collection took place during school hours at convenient times to encourage participation without disrupting lessons.

After collection, questionnaires were checked for completeness, coded, and entered into statistical software. Descriptive statistics were used to summarize teacher characteristics and overall patterns of attitudes, practices, and constraints. Inferential analyses including correlation and regression were then applied to examine relationships between teachers' attitudes, their instructional strategies, and institutional factors affecting implementation. Findings were interpreted using inclusion theory and relevant policy frameworks, while also reflecting the practical realities of public secondary school environments.

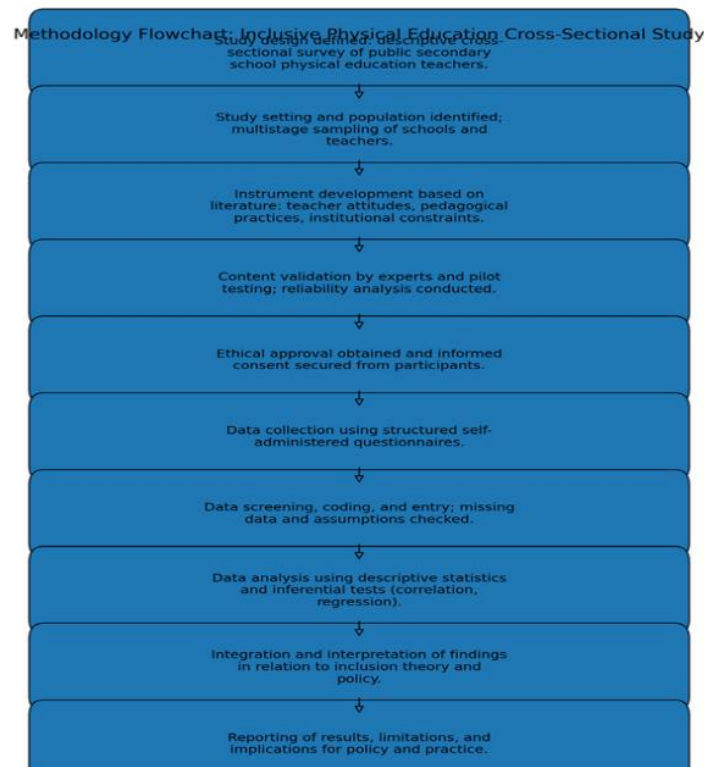


Fig 1: Flowchart of the study methodology

2. Conceptual and Policy Framework for Inclusive Physical Education

Inclusive physical education is shaped by a conceptual and policy foundation that treats diversity as a normal part of every learning environment and affirms that all students should be able to participate meaningfully in school experiences. In public secondary schools, this approach reflects wider commitments to equity, human rights, and social inclusion, while also responding to the practical realities of teaching physical activity to adolescents with different abilities, backgrounds, and learning needs. To understand how inclusive physical education is defined and practiced in schools, it is important to consider the core ideas behind inclusion, the teaching principles that guide physical education, and the national and international policy directions that influence implementation (Burgers, 2017; Harerimana & Mtshali, 2018).

Conceptually, inclusion is built on the belief that learners regardless of physical, sensory, cognitive, or social differences belong in mainstream educational spaces and should receive the support needed to participate fully. This understanding goes beyond simply placing students in the same class. It emphasizes meaningful participation, fair access to learning opportunities, and respect for individual differences. Within physical education, inclusion involves adjusting activities, instruction, and assessment so that students with a wide range of abilities can take part while still being challenged and supported to learn. From a rights-based and social justice perspective, exclusion is viewed less as a problem within the student and more as a result of barriers created by school structures, teaching practices, and limited support systems (Gallicchio, Cooke & Ring, 2017; Jing,

2016).

Physical education pedagogy is central to turning these inclusive principles into practical classroom action. Unlike many classroom-based subjects, physical education is rooted in movement, interaction, teamwork, and embodied learning. This makes it a powerful setting for building belonging and peer connection, but it can also become a space where students feel exposed, judged, or excluded if lessons are not designed with diversity in mind. Inclusive physical education therefore prioritizes learner-centred instruction, flexibility, and responsiveness to students' needs. Common strategies include differentiating tasks to match skill levels, modifying rules and equipment, using cooperative and less competitive activities, and creating multiple ways for students to demonstrate learning and progress. When applied well, these strategies help students experience competence, autonomy, and a stronger sense of belonging within the class (Alexander, 2018; Husband, 2018).

A major pedagogical idea supporting inclusive physical education is universal design for learning, which encourages teachers to plan for learner variability from the start rather than making adaptations only after difficulties arise. The goal is to design lessons that provide multiple ways for students to engage, understand, and participate. In physical education, this might mean offering choices between activities, allowing different intensity levels, blending individual and group tasks, and using varied assessment approaches. Such proactive planning reduces the stigma that can come with "special" adjustments and supports participation for students with disabilities, health conditions, or low confidence in physical activity settings (Baker, 2019; Predoiu *et al.*, 2020).

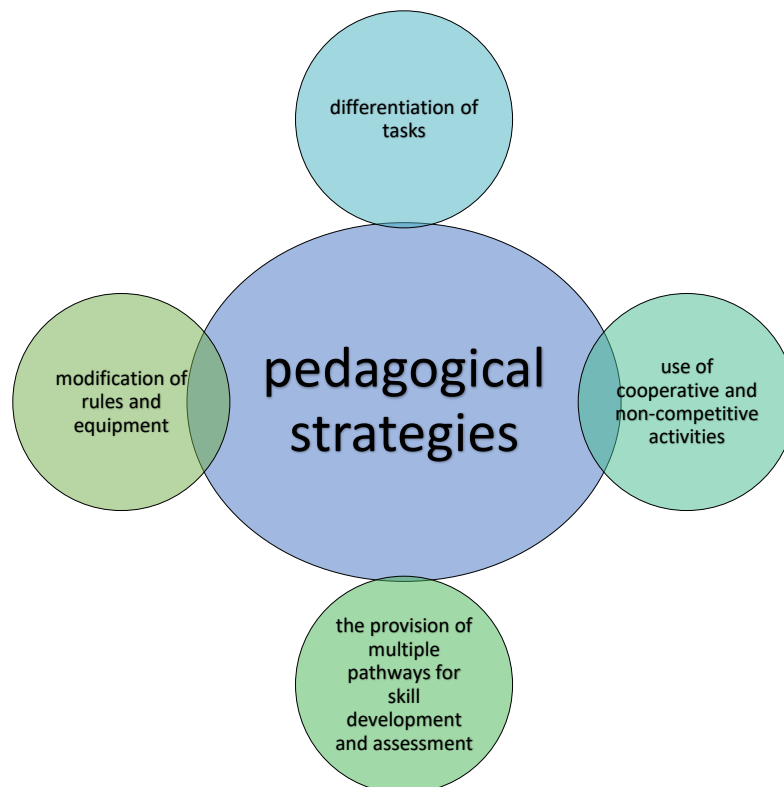


Fig 2: Core pedagogical strategies,

Teacher attitudes and beliefs sit at the heart of inclusive physical education because they shape how inclusion is understood and what it looks like in day-to-day teaching. Even when schools have inclusive policies, it is teachers who translate those policies into lesson choices, classroom routines, and the overall tone of participation. When teachers see inclusion as a shared responsibility and a chance to strengthen their professional practice, they are more likely to experiment with adaptations, use flexible teaching strategies, and create learning environments where every student feels safe to participate. In contrast, when teachers perceive inclusion as an extra burden, a threat to lesson control, or something that competes with curriculum and assessment pressures, they may unintentionally fall back on practices that sideline students who need support. For this reason, the conceptual framework treats teachers not simply as policy implementers, but as active agents whose beliefs, training experiences, and working conditions strongly influence whether inclusive physical education becomes meaningful in practice (Hernández-Mendo *et al.*, 2020; Maher, 2020).

The policy framework for inclusive physical education is shaped by international agreements and declarations that affirm the rights of learners with disabilities and promote inclusive schooling as a pathway to fairness and social cohesion. These global instruments emphasise that inclusion should be reflected across all areas of schooling, including physical education, and that meaningful participation requires more than goodwill it depends on structured support at national, school, and classroom levels. Within this policy discourse, physical education is increasingly recognised as an important space for promoting health, participation, and peer connection, particularly during adolescence when identity and social belonging are highly influential (Brinthaup & Pennington, 2019; Vezzosi, 2017).

National education policies typically translate these international commitments into legislation, regulations, and guidelines that shape school practice. Such policies often mandate inclusive education, define the responsibilities of schools and teachers, and set expectations for curriculum

adaptation, reasonable accommodations, and support services. In many contexts, they prioritise mainstreaming placing students with disabilities in regular classes while encouraging the provision of targeted support where needed. However, the level of detail provided for physical education varies widely. Some policy frameworks offer specific guidance on adapting activities, assessments, and safety procedures, while others speak broadly about inclusion and leave the practical interpretation largely to schools and teachers. Where guidance is limited, teachers may face uncertainty about expectations and may struggle to balance inclusion with performance-based assessment structures, limited resources, and large class sizes. This gap between policy intent and practical clarity makes it essential to examine how inclusive physical education is actually enacted within real school settings, and what supports teachers need to deliver inclusion consistently and confidently.

Curriculum policies are especially influential in determining what inclusive physical education looks like in practice. National physical education curricula usually set out learning goals linked to physical competence, health knowledge, teamwork, and personal development. In principle, inclusive curriculum frameworks encourage flexibility allowing teachers to vary content delivery, assessment approaches, and progression pathways so that learners with different abilities can participate and demonstrate learning in meaningful ways. However, when curricula become rigid or heavily performance-driven, teachers may find it difficult to balance inclusion with standardized expectations. In such situations, students who do not meet “normative” performance benchmarks may be unintentionally sidelined, not because teachers reject inclusion, but because the curriculum structure makes adaptation feel like a deviation rather than part of the design. For inclusive physical education to work consistently, inclusive education mandates must be matched by physical education curricula that are flexible, developmentally appropriate, and supportive of diverse learning trajectories (Fasina, 2019; Mekonnen, Animaw & Seyum, 2018).

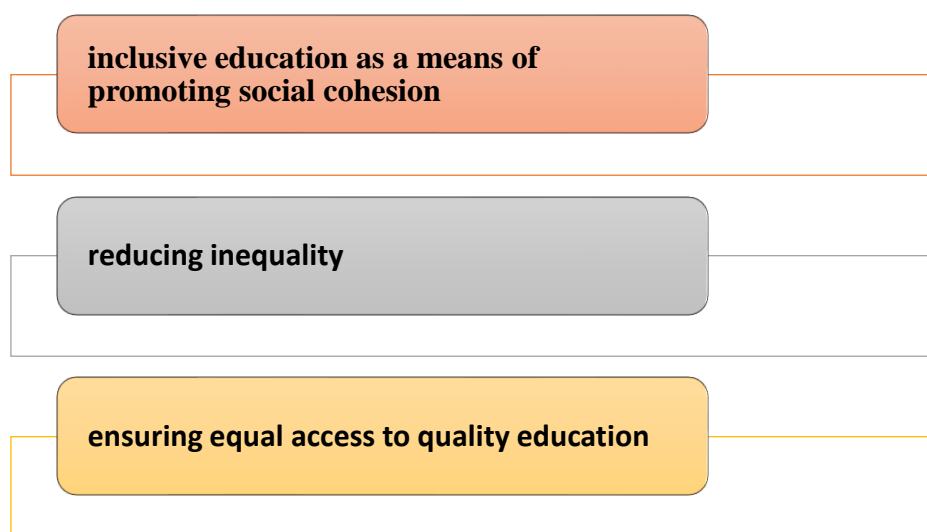


Fig 3: Advocacy of global policy instruments.

Institutional policies and school-level guidelines further shape how national and international commitments are translated into everyday teaching. Decisions about class size, assessment practices, resource allocation, and professional

development directly affect teachers’ ability to implement inclusive physical education. Schools with supportive institutional environments make inclusion more achievable by providing adapted equipment, teaching assistants where

possible, and ongoing training that helps teachers build competence and confidence. In contrast, schools facing overcrowded classes, limited facilities, and weak professional support may unintentionally undermine inclusive practice even when inclusion is formally endorsed. In such contexts, teachers often rely on personal creativity to bridge gaps, but sustained inclusion becomes difficult without structural support (Abayomi *et al.*, 2020; Ibrahim *et al.*, 2019).

The framework for inclusive physical education also highlights the importance of intersectoral collaboration. Effective inclusion often depends on coordination among education authorities, health services, special education professionals, and families. Policies that encourage collaboration and clear information sharing help teachers respond appropriately to diverse needs and plan safely and confidently. In physical education specifically, collaboration can support individualized participation plans, injury prevention, and safe engagement for students with medical conditions or functional limitations.

Despite strong international and national policy commitments, a gap often remains between policy intentions and classroom realities. Limited teacher preparation in inclusive pedagogy, inadequate resources, and weak policy implementation or monitoring contribute to uneven delivery of inclusive physical education in many public secondary school settings. These challenges reinforce the value of empirical research that examines how teachers interpret policy expectations and how institutional contexts shape what inclusion looks like in practice (Adedoyin, 2017; Pathak *et al.*, 2017).

Overall, the conceptual and policy framework for inclusive physical education is grounded in equity, participation, and respect for diversity. It relies on learner-centred pedagogy and is strengthened when rights-based commitments are aligned with flexible curriculum design, supportive school structures, and positive teacher beliefs and practices. Understanding this framework provides a useful foundation for analysing teachers' attitudes, pedagogical strategies, and institutional constraints and for identifying practical pathways toward more consistent, equitable, and effective inclusive physical education in public secondary schools.

3. Teachers' Attitudes Toward Inclusive Physical Education

Teachers' attitudes toward inclusive physical education are one of the strongest influences on whether inclusion is understood as a real classroom practice or remains only a policy statement. These attitudes are not just opinions; they reflect a mix of beliefs, perceptions, emotional responses, and teachers' sense of competence. In adolescence when physical education often involves public participation, competition, and constant peer comparison teachers' attitudes become even more important because they shape whether students experience PE as a safe, supportive space or as an environment where difference is exposed and punished (Munthali *et al.*, 2018; Okolosi, 2020).

At the core of teacher attitudes are beliefs about what inclusion means and why it matters. Many physical education teachers accept inclusion as a moral and professional responsibility tied to fairness, equity, and the right of all students to participate. These beliefs are often influenced by policy expectations, educational values, and personal philosophies about teaching. Teachers who see inclusion as

normal classroom diversity and as a shared responsibility tend to approach lessons with greater flexibility and creativity. However, when inclusion is framed through a deficit lens that emphasizes limitations rather than potential, teachers may feel that inclusive physical education clashes with performance standards, curriculum goals, or safety expectations. Even when such teachers say they support inclusion, these underlying beliefs can still lead to subtle exclusion in practice, such as limiting participation, simplifying tasks excessively, or avoiding meaningful engagement for students with additional needs (Jimoh, 2016; Suleiman *et al.*, 2018).

Beyond beliefs, teachers' perceptions of feasibility strongly determine whether inclusive intentions translate into inclusive practice. PE lessons often take place under difficult conditions large classes, limited time, and wide variation in ability levels. If teachers believe that inclusion is manageable through task modification, differentiated instruction, and peer support, they are more likely to engage positively and persist through challenges. But if inclusion is perceived as too complex, time-consuming, or disruptive to lesson flow, frustration and resistance can emerge. These feasibility judgments are often shaped by previous experiences both successful and unsuccessful in inclusive teaching situations (Chukwurah, Nwadiani & Ngwoke, 2018; Momoh, 2017). Self-efficacy is also central. Teachers' confidence in their ability to plan, manage, and deliver inclusive lessons influences the strategies they use and the effort they are willing to sustain. Teachers with strong self-efficacy are more likely to experiment with adaptations, respond calmly to challenges, and treat inclusion as professional growth. Teachers with low self-efficacy may feel anxious or overwhelmed, especially in PE where safety, movement, and real-time decisions are constant. In such cases, hesitation can translate into avoidance or reduced participation for students who require support (Adebayo, 2018; Deemuai & Nwankwo, 2018).

Teacher preparation and professional training are among the most powerful drivers of both self-efficacy and attitudes. Many teachers report limited exposure to inclusive pedagogy during pre-service training, particularly regarding practical strategies for adapting activities for students with physical, sensory, or cognitive disabilities. When training is mostly theoretical or treats inclusion as a niche topic, teachers may enter the classroom without the tools or confidence needed for inclusive PE. In contrast, hands-on training, mentorship, and continuous professional development tend to strengthen confidence and encourage more positive and committed attitudes toward inclusion (Abdulraheem & Ibraheem, 2019; Okebukola, 2017).

Past experiences with students with disabilities also shape teachers' dispositions. Positive experiences such as seeing student progress, successful peer interactions, or effective collaboration with special education professionals often build confidence and reinforce supportive beliefs. Negative experiences like perceived disruptions, safety concerns, or lack of administrative backing can lead to fear, skepticism, or reluctance. Over time, these experiences accumulate and influence how teachers approach new inclusive situations and what they expect will happen (Abubakar, 2020; Ekuri & Akameze, 2016).

Finally, the school environment itself plays a major role. Teachers are more likely to maintain positive attitudes toward inclusion when leadership is supportive, collaboration is

encouraged, and resources are available. When teachers feel backed by administrators and guided by clear policy expectations, inclusion feels like a collective effort rather than an individual struggle. In under-resourced schools with weak support systems and unclear guidance, teachers may experience inclusion as an added demand that ignores practical realities leading to stress, fatigue, and a gradual decline in motivation to sustain inclusive practice.

Class size and workload are often the first practical obstacles teachers face when trying to deliver inclusive physical education. In PE, large classes usually come with wide differences in ability, fitness, confidence, and behavioural needs, making it difficult to give individual attention. These realities also heighten concerns about classroom control and safety, especially during fast-moving activities or when equipment is limited. In such settings, even teachers who genuinely value inclusion may struggle to implement adaptations consistently, which can lead to frustration and a gradual loss of confidence. The pressure of crowded curricula

adds to the strain, as teachers may feel pushed to “cover content” or focus on measurable performance outcomes rather than ensuring that every student is meaningfully engaged (Abayomi *et al.*, 2020; Esan & Adewunmi, 2018). Cultural norms and wider societal attitudes toward disability also shape how teachers think about inclusion. In environments where disability is misunderstood or stigmatized, teachers may unconsciously adopt societal assumptions that lower expectations of what students with disabilities can achieve. These cultural influences can affect how inclusion policies are interpreted and how comfortable teachers feel modifying long-standing PE traditions. On the other hand, when teachers are exposed to positive disability narratives, inclusive role models, and culturally responsive training, they are more likely to embrace inclusive attitudes that focus on capability, participation, and growth rather than limitation (Emmers, Baeyens & Petry, 2020; Reina *et al.*, 2019).

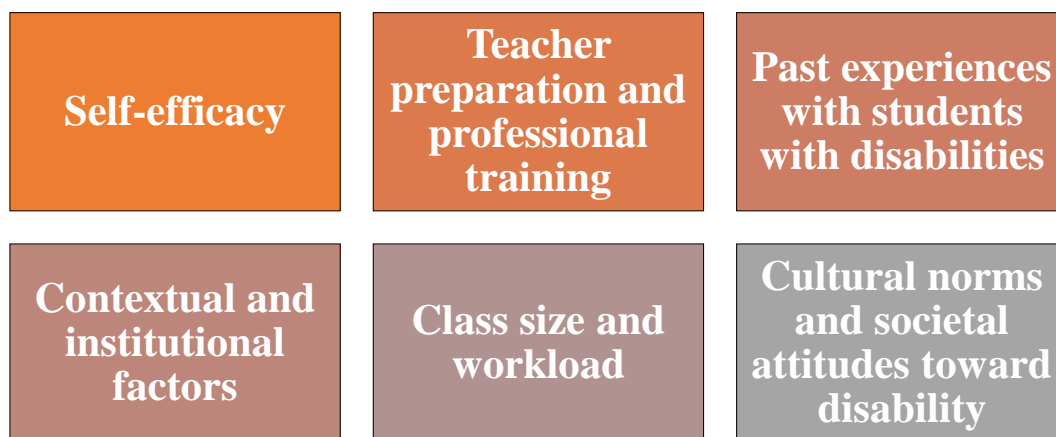


Fig 4: Factors that shape teachers' dispositions toward inclusive physical education

It is also important to recognise that teachers' attitudes toward inclusive physical education are not fixed. They can change over time with experience, reflection, and support. Collaborative practices such as co-teaching with special education professionals, receiving mentorship, or participating in professional learning communities can shift attitudes by providing practical solutions, shared responsibility, and emotional support. These structures reduce the sense of isolation many teachers feel when they are expected to “figure inclusion out” alone. Reflective practice can further strengthen inclusion by helping teachers question assumptions, evaluate what works, and gradually build more confident and flexible teaching habits (Addimando, 2019; Yada & Savolainen, 2017).

Overall, teachers' attitudes toward inclusive physical education are shaped by a connected mix of beliefs, feasibility judgments, self-efficacy, and contextual pressures. Many teachers support inclusion in principle, but how inclusion is enacted often depends on training, available resources, administrative backing, and the wider cultural environment. For this reason, improving teacher attitudes cannot rely on policy mandates alone. It requires sustained investment in teacher education, ongoing professional

development, supportive school structures, and cultural change that normalizes disability inclusion. When teachers are equipped, supported, and confident, inclusive physical education becomes less of an aspiration and more of an everyday practice that benefits all learners.

4. Pedagogical Practices for Inclusive Physical Education

Pedagogical practices represent the practical heart of inclusive physical education, as they translate teachers' beliefs and policy intentions into everyday classroom experiences within public secondary schools. Inclusive physical education is not achieved through goodwill alone; it depends on purposeful instructional strategies, flexible curriculum design, responsive assessment methods, and effective classroom management that allow students with diverse abilities to participate safely and meaningfully. In secondary school contexts, where physical education often involves complex motor skills, peer interaction, and performance-based expectations, inclusive pedagogy must be intentional, adaptable, and informed by a clear understanding of learner diversity (Muwonge, Zavuga & Kabenge, 2015; Wilhelmsen & Sørensen, 2017).

Instructional practices in inclusive physical education

emphasize flexibility, differentiation, and student-centered learning. Teachers are expected to design lessons that accommodate differences in physical ability, motor development, health status, and learning preferences. Differentiated instruction is particularly central, as it allows students to pursue shared learning objectives through varied activities, difficulty levels, or modes of participation. For instance, a lesson focused on cardiovascular fitness may involve walking, jogging, cycling, or modified games, enabling students to engage at an appropriate and personally meaningful intensity. Cooperative learning further supports inclusion by encouraging peer support, shared responsibility, and positive social interaction. When students work in mixed-ability groups with clearly defined collaborative roles, competitive pressure is reduced and a stronger sense of belonging can be fostered (O'Brien *et al.*, 2020; Vaz *et al.*, 2015).

Task modification is another essential instructional strategy in inclusive physical education. This involves adjusting rules, equipment, space, or activity duration to align with students' abilities while preserving the core learning goals. Examples include using lighter or larger balls, reducing the size of playing areas, simplifying movement patterns, or allowing alternative ways to complete tasks. Effective task modification requires teachers to remain observant and responsive, making adjustments in real time as students' needs become apparent. When thoughtfully implemented, task modification allows students with disabilities or lower skill levels to experience success alongside their peers, strengthening motivation and sustained engagement (Hutzler *et al.*, 2019; Nketsia, 2017).

Curriculum adaptation plays a crucial role in aligning inclusive principles with formal physical education requirements. While national or regional curricula typically specify learning outcomes related to physical competence, teamwork, health knowledge, and personal development, inclusive practice requires these outcomes to be interpreted flexibly. Rather than lowering standards, curriculum adaptation focuses on offering multiple pathways for students to demonstrate learning in ways that reflect their abilities. This often involves emphasizing process-oriented outcomes such as effort, improvement, and participation, rather than narrow performance benchmarks. Inclusive curriculum design also encourages the selection of activities that are culturally relevant, developmentally appropriate, and accessible to diverse student populations (Onukwugha *et al.*, 2020; van Zijl, Drive & Cape, 2017).

Universal Design for Learning provides a useful framework for supporting curriculum adaptation in inclusive physical education. By planning lessons that offer multiple means of engagement, representation, and expression from the outset, teachers can reduce the need for individual accommodations and create more inclusive learning environments. Providing choices in activities, combining visual demonstrations with verbal explanations, and using peer modeling are examples of strategies that broaden access to learning. Similarly, allowing students to demonstrate learning through performance, peer teaching, or reflective discussion recognizes diverse strengths and reduces barriers to participation (Adogu, 2015; Oluwaseyi, 2019).

Assessment practices must also align with inclusive instruction and adapted curricula. Traditional assessment approaches that prioritize standardized performance measures or competitive outcomes may disadvantage

students with disabilities or varying skill levels. Inclusive assessment instead emphasizes formative, criterion-referenced, and individualized methods that focus on progress, effort, and personal achievement. Tools such as observational checklists, skill progression records, self-assessment, and peer feedback enable teachers to capture a more holistic picture of student learning. Beyond improving fairness, these approaches support students' self-awareness, confidence, and motivation (Adenrele, 2015; Kadijat, 2015). Transparency and flexibility in assessment are particularly important at the secondary school level, where grades can shape students' academic pathways and self-concept. Inclusive assessment practices ensure that expectations are clearly communicated and adjusted to reflect individual learning goals. For students with specific needs, this may involve extended time, alternative assessment tasks, or modified performance criteria. When assessment is used primarily as a tool for learning rather than comparison or ranking, it reinforces inclusive values and contributes to more positive educational experiences.

Classroom management is equally critical in sustaining inclusive physical education environments. Effective management extends beyond controlling behavior to encompass safety, organization, and emotional support. Inclusive classroom management emphasizes clear routines, consistent expectations, and proactive strategies that anticipate diverse needs. Structured lesson formats and predictable transitions can reduce anxiety, particularly for students who require additional guidance or support. Clear communication of rules and safety procedures is especially important in inclusive settings, where students may have differing levels of physical control or risk awareness (Kunnuji, 2018; Shiffman *et al.*, 2018).

Positive behavior support lies at the core of inclusive classroom management. Rather than relying on punitive approaches, inclusive physical education prioritizes encouragement, reinforcement of appropriate behaviors, and constructive feedback. A strengths-based approach helps students build confidence and resilience while contributing to a supportive class climate. Peer-mediated strategies, such as buddy systems or cooperative group roles, further enhance inclusion by promoting mutual support and shared responsibility (Kunnuji *et al.*, 2017; Mukoro, 2017).

Managing diversity in inclusive physical education also requires careful attention to social dynamics. Adolescents are particularly sensitive to peer evaluation and social comparison, which can intensify feelings of exclusion or embarrassment. Teachers play a vital role in shaping inclusive social norms by modeling respect, addressing stigmatizing behaviors, and fostering a culture of acceptance. Intentional grouping, inclusive language, and structured opportunities for reflection can help create learning environments where diversity is genuinely valued rather than merely tolerated (Awe, Akpan & Adekoya, 2017; Osabuohien, 2017).

Despite the promise of inclusive pedagogical practices, their implementation is often constrained by institutional challenges such as large class sizes, limited equipment, and inadequate professional support. Teachers in under-resourced public secondary schools may find it difficult to balance inclusive practices with curriculum demands and time pressures. These realities highlight the importance of ongoing professional development, collaborative planning, and sustained institutional commitment to inclusion (Akpan, Awe

& Idowu, 2019; Ogundipe *et al.*, 2019).

In sum, inclusive pedagogical practices in physical education encompass a wide range of instructional strategies, curriculum adaptations, assessment methods, and classroom management approaches designed to support diverse learners. When effectively implemented, these practices promote meaningful participation, equity, and students' physical, social, and emotional development. However, their success depends not only on teachers' skills and confidence but also on the availability of institutional support and resources. Strengthening inclusive physical education in public secondary schools therefore requires coordinated efforts to align curriculum, assessment, teacher training, and infrastructure with the principles of inclusion, ensuring that physical education becomes a space of opportunity, dignity, and belonging for all students (Awe & Akpan, 2017; Isa, 2019).

5. Institutional Constraints Affecting Implementation

Inclusive physical education in public secondary schools is influenced not only by teachers' attitudes and classroom practices, but also often more decisively by institutional constraints embedded within the wider school system. These constraints include structural conditions, administrative weaknesses, and resource limitations that shape what teachers can realistically do in day-to-day lessons. Even when teachers are willing and professionally committed to inclusive education, they may be working in environments that make sustained inclusion difficult to achieve in practice. As a result, inclusion can remain more of a policy intention than a consistent classroom reality, particularly in under-resourced public school contexts (Ajayi & Akanji, 2021; Ejibenam *et al.*, 2021; Osabuohien, Omotara & Watti, 2021). Structural barriers are among the most visible obstacles to inclusive physical education. Large class sizes, which are common in many public secondary schools, limit teachers' capacity to provide individualized instruction, monitor students closely, and respond to diverse needs in real time. Physical education settings also carry higher safety demands than many classroom subjects because movement-based activities increase risks of injury, overcrowding, and mismanagement. In inclusive classes where some learners may require closer supervision, mobility support, or modified tasks, overcrowding can intensify teachers' concerns about safety, time management, and classroom control. Under these conditions, teachers may default to uniform activities that are easier to manage, but less adaptable often leaving students who need adjustments on the margins of participation (Akanji & Ajayi, 2022; Francis Onotole *et al.*, 2022).

Timetabling and curriculum structures further limit inclusive practice in physical education. In many secondary schools, physical education is assigned less time than examinable academic subjects, reflecting its relatively low institutional priority. Short lesson periods and infrequent sessions reduce opportunities for progressive skill development, inclusive feedback, and meaningful adaptation for diverse learners. In addition, physical education may be scheduled at inconvenient times or removed when academic pressures increase, reinforcing the perception that it is expendable. When physical education is structurally marginalized in this way, it becomes harder for teachers to implement inclusion consistently and harder for students to experience the subject as a legitimate learning space where everyone belongs (Awe, 2021; Halliday, 2021; Isa, 2021; Jimoh & Owolabi, 2021).

Administrative constraints also shape the degree to which inclusive physical education is implemented effectively. A common problem is the gap between inclusive education policies and the operational guidance needed for practical implementation. Policies may exist at national or state levels, but schools may lack clear procedures, monitoring structures, and accountability mechanisms that translate inclusion into specific expectations for physical education. When guidance is vague, teachers are left to interpret inclusion independently, producing uneven implementation across schools and even within the same school. This inconsistency often reflects differences in individual teacher capacity rather than a coordinated institutional plan (Adeshina, 2021; Isa, Johnbull & Oveneri, 2021; Wegner, Omine & Vincent, 2021).

Leadership support is another key administrative factor. Inclusion in physical education requires administrators who actively prioritize equity, encourage collaboration, and allocate time and resources to support inclusive practices. In schools where leadership focuses mainly on examination outcomes and academic performance metrics, inclusive physical education may receive little attention. Teachers may then experience inclusion as an additional burden rather than an institutional responsibility shared across the school. Without visible leadership commitment, teachers have fewer incentives and fewer opportunities to innovate, collaborate, or access support making inclusive practice more fragile and dependent on personal effort (Ajayi & Akanji, 2023; Halliday, 2023; Udensi, Akomolafe & Adeyemi, 2023).

Resource-related barriers remain among the most significant institutional constraints. Inclusive physical education requires suitable facilities and equipment to ensure that activities can be adapted safely and meaningfully. Yet many public secondary schools operate with inadequate or poorly maintained spaces such as overcrowded fields, limited indoor areas, and insufficient materials for routine instruction. Adaptive equipment such as modified balls, mobility supports, or inclusive sports tools is often unavailable. In such settings, teachers may struggle to modify activities effectively, particularly for students with physical disabilities or medical needs. The result is that exclusion may occur not because teachers intend to exclude, but because the learning environment makes inclusion practically difficult to sustain (Akinbode *et al.*, 2023; Onibokun *et al.*, 2023; Osabuohien *et al.*, 2023).

Human resource limitations further compound these challenges. Inclusive physical education often benefits from additional support personnel, including teaching assistants, special educators, therapists, or health professionals who can help plan adaptations and supervise learners who need extra support. In many public schools, these forms of support are either absent or inconsistently available, leaving physical education teachers to manage diverse classes alone. This increases workload, stress, and the likelihood that inclusive strategies will be simplified or abandoned under pressure. Where collaboration between physical education teachers and special education professionals is weak, inclusive support becomes fragmented and reactive rather than planned and coordinated (Akande & Chukwunweike, 2023; Awe *et al.*, 2023; Ogundipe *et al.*, 2023).

Professional development is another critical resource constraint. Although inclusive education policies often assume that teachers will have the competence to adapt instruction, many physical education teachers report limited

access to sustained training that is specific to inclusive physical education. When training exists, it may be broad and theoretical rather than practical, ongoing, and tailored to the realities of teaching movement-based content in crowded environments. Without targeted training, teachers may lack confidence in adaptation, assessment adjustments, disability-sensitive communication, and safety management. This can weaken self-efficacy and lead to superficial implementation, where inclusion becomes a “minimum compliance” activity rather than a genuinely supportive practice (Ajayi & Akanji, 2022; John & Oyeyemi, 2022; Osabuohien, 2022).

Financial constraints underpin many of these limitations. Public secondary schools in resource-limited systems often operate under budgets that prioritize core academic infrastructure and staffing, leaving limited funds for facility upgrades, equipment procurement, or specialist services that support inclusion. Where inclusion competes with multiple urgent needs, administrators may hesitate to invest in inclusive physical education unless policy frameworks provide incentives, dedicated funding, or external support. This creates a cycle in which inclusive policies exist on paper, but the material conditions required for implementation remain weak (Adeshina, 2023; Onyedikachi *et al.*, 2023; Wegner & Ayansiji, 2023).

Assessment and accountability systems also influence institutional priorities. In many education systems, school success is measured largely through standardized academic outcomes, which can reduce attention to subjects like physical education. When institutional reward structures do not value inclusive participation in physical education, investment and innovation tend to decline. Teachers may focus on meeting general curriculum expectations under time pressure rather than adapting instruction to meet diverse needs, especially when inclusion is not explicitly monitored or rewarded within accountability frameworks. This performance-driven environment can indirectly weaken inclusive practice, even where teachers are supportive of inclusion in principle (Akpan *et al.*, 2017; Oni *et al.*, 2018; Isa, 2020).

Institutional culture and systemic attitudes also shape the implementation landscape. In some school contexts, disability and learner diversity may still be viewed through deficit-oriented lenses, influencing expectations, resource allocation decisions, and support planning. Such perspectives can lead to low expectations for students with disabilities, reliance on segregation, or minimal investment in inclusive strategies. Changing institutional culture requires sustained leadership, coherent policies, staff collaboration, and community engagement. However, these changes can be slow and difficult within public school systems that are already strained by limited staffing, funding, and infrastructure (Adeleke & Ajayi, 2023; Adeshina, Owolabi & Olasupo, 2023; Oyeyemi, 2023).

Even so, institutional constraints are not inevitable barriers to progress. Research and practice suggest that schools with strong leadership commitment, collaborative cultures, and strategic use of available resources are more likely to implement inclusive physical education effectively. Incremental improvements such as flexible scheduling, creative use of space, peer-support models, and targeted professional learning can reduce barriers even in low-resource settings. These changes are most effective when inclusion is understood as a shared institutional responsibility, rather than a burden placed solely on

individual teachers (Ajayi & Akanji, 2022; Leonard & Emmanuel, 2022).

Overall, the implementation of inclusive physical education in public secondary schools is profoundly shaped by institutional constraints. Large class sizes, limited instructional time, unclear policy guidance, weak leadership support, inadequate facilities, insufficient personnel, limited training opportunities, and restricted funding collectively reduce teachers’ capacity to deliver inclusive practice consistently. Addressing these constraints requires coordinated reforms at policy and school levels, including equitable resource allocation, stronger leadership engagement, improved accountability systems, and professional development tailored to the realities of physical education. Without such systemic support, inclusive physical education is likely to remain an aspirational ideal rather than a sustained and effective practice within public secondary schools (Abdulkareem *et al.*, 2023; Adeleke & Ajayi, 2023; Halliday, 2023).

6. Interplay Between Attitudes, Practices, and Institutional Context

Inclusive physical education in public secondary schools is produced through a dynamic interaction between teachers’ attitudes, their pedagogical practices, and the institutional conditions under which they work. These dimensions do not operate in isolation; they continually influence one another in ways that shape how inclusive education policies are understood, enacted, and sustained in daily school life. Appreciating these relationships helps explain why inclusive physical education may thrive in some schools but remain weak or inconsistent in others, even when policy language appears similar across contexts (Ogunyankinnu *et al.*, 2022; Onibokun *et al.*, 2022).

Teachers’ attitudes provide the psychological and professional starting point for inclusive practice. Beliefs about disability and learner diversity, perceptions of feasibility, and self-efficacy strongly influence how teachers respond to inclusion demands in physical education settings. Where teachers see inclusion as ethically important and educationally valuable, they are more likely to reflect on practice, search for adaptive solutions, and persist when challenges arise. Positive attitudes are also associated with openness to collaboration and greater willingness to experiment with instructional modifications. However, attitudes alone do not guarantee inclusive implementation. Even teachers who strongly support inclusion may struggle to translate commitment into action when daily realities include overcrowded classes, inadequate facilities, limited equipment, and rigid curriculum expectations (Akande *et al.*, 2023; Akinbode, Taiwo & Uchenna, 2023; Onotole *et al.*, 2023).

Pedagogical practices are the main route through which teacher attitudes become visible in the classroom. Instructional choices such as task differentiation, cooperative learning, curriculum adaptation, flexible assessment, and supportive classroom management reflect teachers’ beliefs about participation, capability, and fairness. Teachers with more positive attitudes and stronger confidence tend to select learner-centered strategies that create multiple pathways for engagement, allowing students of varying abilities to participate meaningfully. In contrast, when inclusion is perceived as unrealistic, time-consuming, or burdensome, teachers may adopt standardized, performance-driven

approaches that prioritize control, efficiency, and uniformity. While such approaches can appear orderly, they often narrow participation opportunities and unintentionally exclude learners who require adjustments, reinforcing inequities even under inclusive policy frameworks (Ajayi & Akanji, 2022; Isa, 2022).

Institutional context acts as a powerful mediator between teacher attitudes and pedagogical practice. Leadership priorities, resource availability, professional development access, staffing levels, policy clarity, and timetable structures determine whether teachers are able to implement inclusive strategies consistently. In supportive environments where administrators allocate adequate time for physical education, provide or improvise adaptive equipment, encourage collaborative planning, and clarify expectations teachers are more likely to feel empowered to adapt lessons and take inclusive risks. In such contexts, successful experiences can reinforce positive attitudes and strengthen teachers' sense of competence, creating a reinforcing cycle of improvement and commitment (Akomea-Agyin & Asante, 2019; Awe, 2017; Osabuohien, 2019).

Conversely, restrictive institutional conditions can weaken both attitudes and practice, even among motivated teachers. Large class sizes, limited facilities, absence of support staff, and ambiguous policy guidance increase workload and stress while reducing the perceived feasibility of inclusive physical education. When teachers repeatedly encounter barriers that prevent them from meeting diverse learners' needs, frustration can accumulate and gradually reshape attitudes. Over time, teachers may begin to interpret inclusion as an unrealistic demand imposed without adequate support, which can result in resistance, minimal compliance, or increased reliance on exclusionary practices. This illustrates that institutional constraints do not only limit what teachers can do; they also shape how teachers feel about inclusion and whether they believe it can realistically succeed (Ogunyankinnu *et al.*, 2022; Oyeyemi, 2022).

Professional development represents a key intersection where attitudes, practice, and institutional context converge. Targeted training that is practical, ongoing, and specific to physical education can increase teachers' self-efficacy, deepen their understanding of inclusive methods, and expand their pedagogical repertoire. When such training is supported by school leadership and aligned with everyday school conditions, it strengthens teachers' confidence and reinforces positive beliefs about inclusion. In contrast, when training is absent, overly theoretical, or generic, teachers may remain unsure about how to adapt activities safely and meaningfully, especially in physically demanding and socially sensitive PE environments. Institutional commitment to sustained professional learning therefore becomes a central mechanism for aligning attitudes and practice with inclusive aims (Ajayi & Akanji, 2022; Isa, 2022).

Leadership and school culture further shape how these dimensions interact. School leaders influence implementation not only through resource allocation but also through the values they promote and the behaviors they reward. Inclusive leadership that emphasizes equity, encourages collaboration, and validates inclusive practice helps to build a culture where inclusion is understood as a shared responsibility rather than an individual teacher's burden. In such cultures, teachers are more likely to exchange strategies, seek help, and reflect openly on challenges, strengthening the link between inclusive attitudes and

inclusive pedagogy. By contrast, where leadership focuses mainly on examination performance or administrative compliance, inclusion may be treated as peripheral, weakening motivation and limiting innovation within physical education (Akanke *et al.*, 2023; Akinbode *et al.*, 2023; Chukwuemeka, Wegner & Damilola, 2023).

Collaboration within the wider school community also mediates implementation. Opportunities for co-teaching, interdisciplinary planning, and consultation with special education professionals can reduce teacher isolation and distribute responsibility for inclusion. Collaborative structures allow teachers to share expertise, plan adaptations more effectively, and respond to learner needs with coordinated support. Where collaboration is limited by workload pressure, weak staffing, or unsupportive structures, teachers may operate in isolation, reducing confidence and willingness to attempt inclusive innovations. In this sense, collaboration strengthens both practice and attitude by making inclusion feel achievable and collectively owned (Ajayi & Akanji, 2023; Isa, 2023; Oyeyemi & Kabirat, 2023). External pressures also influence these relationships. Accountability systems that prioritize standardized academic outcomes can marginalize physical education and reduce institutional willingness to invest in inclusive PE resources and training. Teachers may struggle to reconcile inclusive values with performance-driven expectations, shaping both their attitudes and their instructional decisions. At the same time, broader societal attitudes toward disability filter into schools, influencing institutional norms, peer interactions, and staff expectations in ways that can either support or undermine inclusion (Adeleke & Baidoo, 2022; Isa, 2022; Oyeyemi, 2022).

Crucially, these relationships remain dynamic rather than fixed. Improvements in one dimension can trigger positive shifts in others. For example, better resourcing, clearer policies, or reduced class sizes can raise teachers' perceived feasibility of inclusion, enabling more confident inclusive practice and strengthening attitudes through successful experience. Similarly, when teachers experience success with inclusive strategies, they may become stronger advocates for institutional support, helping drive broader change. This reciprocity suggests that sustainable reform in inclusive physical education requires coordinated attention to teacher capacity, pedagogical support, and institutional conditions rather than isolated interventions focused on only one area (Ajayi & Akanji, 2023; Isa, 2023; Oyeyemi & Kabirat, 2023). In conclusion, inclusive physical education implementation in public secondary schools is shaped by a continuous interplay between teachers' attitudes, their pedagogical practices, and the institutional environments in which they work. Teacher beliefs and self-efficacy influence classroom decisions, while institutional support or constraints determine how effectively those decisions can be enacted. Institutional realities also shape teacher attitudes over time through repeated experiences of success, frustration, or burnout. Recognizing these reciprocal relationships highlights the need for holistic inclusion strategies that strengthen teacher competence while also addressing systemic barriers within schools (Adeleke & Baidoo, 2022; Isa, 2022; Oyeyemi, 2022). When positive attitudes, inclusive pedagogy, and enabling institutional frameworks are aligned, public secondary schools are better positioned to deliver inclusive physical education as a meaningful, sustained, and equitable practice for all learners.

7. Conclusion and Implications for Policy and Practice

This study investigated how inclusive physical education is implemented in public secondary schools by examining the interconnected influence of teachers' attitudes, pedagogical practices, and institutional constraints. The findings suggest that although many physical education teachers express strong philosophical support for inclusion and acknowledge its importance for equity and holistic student development, implementation remains inconsistent across schools and classrooms. Teachers' beliefs about inclusion, perceptions of feasibility, and levels of self-efficacy shape the extent to which they adopt differentiated instruction, curriculum adaptations, and flexible assessment practices that accommodate diverse learners. However, these teacher-level factors are continually filtered through institutional realities that either support or restrict inclusive practice, meaning that willingness alone rarely translates into sustained inclusion without enabling conditions.

A key outcome of the study is that positive attitudes and inclusive intentions are frequently weakened by structural and administrative barriers within public secondary school systems. Large class sizes limit teachers' ability to provide individualized support and to manage safety in activity-based lessons, while limited instructional time reduces opportunities for progressive learning, feedback, and inclusive engagement. Inadequate facilities, poorly maintained spaces, and a shortage of adaptive equipment further constrain teachers' capacity to modify tasks meaningfully, especially for students with physical disabilities or health-related limitations. Beyond these resource concerns, weak operationalization of inclusive education policies at the school level creates unclear expectations, inconsistent implementation, and limited accountability, often leaving teachers to interpret inclusion independently. Over time, persistent exposure to these constraints shapes teachers' experiences, contributing to frustration, reduced confidence, and in some cases, declining commitment to inclusive practice.

The pedagogical patterns identified in the study reflect a continuum ranging from adaptive, learner-centered approaches to standardized, performance-oriented instruction. Teachers with higher self-efficacy and stronger institutional support were more likely to use differentiation, task modification, cooperative learning, and inclusive assessment strategies that emphasize participation and progress. By contrast, teachers working in low-resource contexts tended to rely on uniform activities that were easier to manage in large classes but less responsive to learner diversity. This divergence demonstrates that inclusive physical education is not determined solely by teacher belief or motivation; rather, it is shaped through reciprocal interaction where institutional conditions influence pedagogical choice, and repeated classroom experiences feed back into teachers' beliefs about what is realistic and sustainable.

The study's limitations should be recognized when interpreting these findings. Because the design was cross-sectional, the analysis cannot establish causality or capture how attitudes and practices evolve over time in response to changing institutional conditions. The heavy reliance on self-reported data introduces the possibility of social desirability bias, where teachers may present their practices in a more

favorable light, as well as recall bias. In addition, the focus on public secondary schools within a particular setting limits generalizability to other contexts, including private schools or education systems with different resource profiles, governance structures, or accountability pressures. Future studies would benefit from longitudinal research designs, direct classroom observations, and comparative work across multiple school types and regions to strengthen explanatory depth and external validity.

Several practical recommendations arise from the findings for improving inclusive physical education implementation in public secondary schools. At the policy level, inclusive education mandates should be matched with clear, subject-specific guidelines that explicitly address physical education, rather than relying on broad statements that do not translate into practice. Education authorities should also strengthen funding strategies to improve facilities, procure adaptive equipment, and reduce class sizes where feasible, because these factors strongly influence what teachers can realistically implement. At the school level, leadership must move beyond symbolic support by actively creating enabling environments through resource prioritization, timetable protection for physical education, and clear internal processes for implementing and monitoring inclusive practice. Inclusion is more likely to be sustained when it is framed as a shared institutional responsibility rather than an individual teacher's burden.

Teacher preparation and professional development are equally essential. Pre-service and in-service programs should prioritize practical, context-sensitive strategies for differentiation, modification of activities, inclusive assessment, and safety-focused classroom management within physical education settings. Training should be continuous and supported by mentoring, peer learning communities, and opportunities for co-teaching or interdisciplinary collaboration with special education personnel and health professionals. Such supports help strengthen self-efficacy and reduce teacher isolation, making inclusive practice more achievable in real-world school conditions. Overall, the evidence indicates that meaningful inclusive physical education requires coordinated action that aligns teacher capacity, pedagogical practice, and institutional support. When these elements are addressed together, public secondary schools are better positioned to move beyond policy rhetoric and deliver inclusive physical education that promotes participation, equity, and meaningful learning for all students.

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