

Inclusive Teaching Practices In Physical Education For Students With Special Needs

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Abstract– This study analyzes inclusive pedagogical practices in physical education (PE) for special needs students, highlighting teaching strategies, challenges faced, and teachers' and stakeholders' commitment towards equity and participation. Drawing from the meta-synthesis of qualitative research from 2021 to 2025, the study highlights important inclusive strategies like differentiated instruction, adaptive communication, environmental modification, and cooperative planning. Significant barriers are put forth, such as systemic barriers like poor training, ineffective application of policies, poor resources, and attitudinal resistance from teachers. However, strong commitment towards inclusive values and collaborative practice among teachers, families, and communities is essential for the development of effective inclusion. The study emphasizes the importance of continuous professional training, institutional support, and integrated policies to ensure inclusive PE. Findings reveal that effective inclusive PE programs not only enhance physical health and motor skills but also enhance social integration and emotional resilience among special needs students. The study recommends further research on policy implementation and practical enforcement of inclusion models in schools to ensure the policy-practice gap.

Key words: Differentiated instruction, Participation barriers, Support strategies, Adaptive instruction, Disability inclusion

I. INTRODUCTION

Inclusive education is an international drive focused on offering equal and quality learning opportunities to all learners, including disabled students with physical, cognitive, or emotional disabilities [67]. Defined in most instances as quality education, Sustainable Development Goal 4 (SDG 4) is committed to ensuring that all people are provided with an inclusive and equitable quality of education that improves learning opportunities. In this context, physical education (PE) is playing a central role in improving overall development while promoting motor skills, social skills, and emotional resilience among disabled and non-disabled students [43]. Studies have shown that PE not only improves physical health but also improves academic performance and mental well-being, thus being part of inclusive education [6].

Although it has benefits, special needs learners are typically excluded from physical education by various barriers, including physical disability, stigma, inadequate resources, and inadequate teacher training [1]. The study of [36] also confirms this fact with evidence that long-term system barriers still prevail, including inadequate finances, attitudinal resistance, and professional development deficits. Although policies like the Inclusive Education Policy Framework of the Philippines promote equal participation, the majority of teachers are not in a position to adjust curricula and pedagogy to include diverse learners [6]. Inclusive success requires the enforcement of practices like differentiated instruction, adaptive equipment, and collaboration between general and special education teachers [31].

Although other research stresses the importance of inclusive PE, few research works focus on practical implementation strategies, particularly in the Philippines. The present research seeks to explore current inclusive practice in PE, identify the important challenges faced by teachers, and explore potential solutions towards making special needs learners more accessible. In addressing the above knowledge gaps, this research will enable the realization of more inclusive and effective PE programs that are consistent with the practice of inclusive education.

This research aimed to critically review and synthesize qualitative studies on inclusive teaching in adapted physical education, with the goal of identifying the most significant factors that impact effective practice in diverse learning settings.

II. METHODS

This study utilized a meta-synthesis to address research questions. Meta-synthesis includes qualitative studies employing phenomenology, case study, interpretive description, and qualitative description. A systematic screening of multiple qualitative studies was conducted to generate a new, integrative interpretation of existing findings [49].

A. Search Strategy and Procedure

Data selection was conducted using Publish or Perish software [29] to access academic databases, including Google Scholar, Crossref, and ResearchGate. The search focused on studies exploring inclusive education in teaching physical education to students with special needs. The researcher entered relevant keywords into the search fields, using commas to separate terms. This approach allowed the retrieval of studies containing any of the specified keywords.

The following keywords were used: *Inclusive Teaching Practices*, *Adapted Physical Education*, and *Students with Special Needs*.

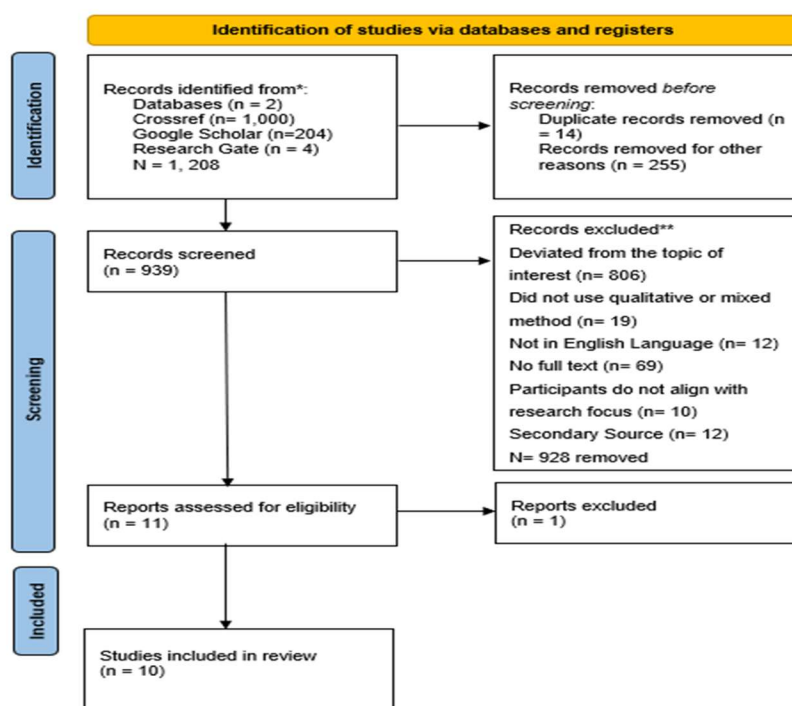


Figure 1. PRISMA Flow Diagram

As shown in Figure 1, the initial database search resulted in a total of 1,208 articles: 1,000 from Crossref, 204 from Google Scholar, and 4 from manual searches on ResearchGate. After manually removing duplicates using Microsoft Excel, 14 duplicate records and 255 book records were excluded, leaving 939 studies for screening. Based on abstract reviews and eligibility criteria, 928 studies were excluded for the following reasons: 806 were irrelevant to the research focus, 19 did not employ qualitative or

mixed methods, 12 were non-English publications, 10 included participants outside the research scope, 12 were secondary sources, and 69 lacked full-text access.

Eleven (11) studies remain for full-text appraisal and screening for the Critical Appraisal Skills Programme [9]. After the screening, 1 study is excluded since it is a secondary source. As a result, 10 studies met the CASP requirements and were screened thrice by the researchers for eligibility. As emphasized by [69], a meta-synthesis should include, whenever possible, at least 10 to 12 primary studies to produce valid and meaningful conclusions. Table 1 displays the characteristics of the included studies being meta-synthesized.

B. Inclusion and Exclusion Criteria

These inclusion and exclusion criteria helped the researcher provide answers to the following questions. The studies chosen for inclusion met the following criteria: (1) published studies that focused on inclusive teaching practices in physical education for students with special needs, (2) studies that use qualitative methodology and mixed methodology where only the qualitative part was used, (3) findings in the English language, and (4) published studies occurring in the timeframe between January 2021 and June 2025 so that all the data retrieved are relevant to the field of research and can be used for future purposes. This approach aligns with the recommendation that clear, explicit inclusion and exclusion criteria enhance transparency and methodological rigor in systematic reviews within educational research [65]. On the other hand, books and non-peer-reviewed sources were excluded; only journal articles were screened and evaluated for inclusion. Hence, the Critical Appraisal Skills Programme [9] tool was administered to all the selected studies to evaluate their reporting and methodological quality. The tool was made to appraise studies' credibility. This process helped the researchers determine whether the studies were eligible to be synthesized.

C. Data Analysis

Data was collected from the outcome sections associated with the descriptions of inclusive physical education teaching practices for children with special needs. Data will be analyzed using Braun and Clarke's thematic analysis process [12]. It is a six-step process undertaken by becoming familiar with the data, creating initial codes, searching for themes, evaluating themes, naming and defining themes, and creating reports. These themes will emerge from this line of inductive thinking to define the common competencies exhibited by teachers in inclusive and adapted physical education settings. Thematic analysis was utilized due to its flexibility, ability to identify trends in qualitative work, and ability for rich interpretation.

Braun and Clarke's reflexive thematic analysis is a simple yet flexible six-phase process with an emphasis on the role played by the researcher in interpreting qualitative data to develop themes [12]. The process begins with familiarization, where researchers get immersed in the data, reading, rereading, and transcribing while making notes and writing down assumptions to construct an open interpretative framework. Second, in initial coding, analysts apply systematic descriptive or conceptual labels to pieces of the data with the recognition that these codes are analytic constructs influenced by theoretical views and not neutral tags. At this point, breadth is more important than simplicity so that a rich array of codes can be established. The third stage, developing candidate themes, consists of grouping related codes into initial themes that represent patterns of common meaning. Researchers intentionally "create" themes, illustrating connections among codes and drafting narrative descriptions that express the core essence of each theme. During the theme review process, the researchers, together with an expert, assessed the themes on two levels: firstly, their internal consistency by revisiting coded excerpts, and secondly, their compatibility with the overall dataset, which may result in the merging of similar themes, the division of complex ones, or the identification of gaps that necessitate additional coding. Initially, there are seven themes that emerge, but after the review, it is found out that there are themes that can be merged with the others since they have similar and related codes.

In the process of defining and naming themes, researchers refine the scope and boundary conditions of each theme and generate labels and compose summaries that incorporate representative quotations and theoretical links, all while acknowledging their interpretive choices. The final step in producing the report views writing as a further extension of analysis. Researchers integrate thematic description with relevant data extracts and reflections on their methodology, frequently returning to earlier phases as fresh insights emerge. Throughout all stages, critically assessing the researcher's impact and recursivity, the process of moving

back and forth between phases, ensures that thematic analysis continues to be a dynamic and interpretive practice, rather than a simple coding task. This blend of open processes and epistemological flexibility has contributed to reflexive thematic analysis being the core method for exhaustively investigating intricate social phenomena in qualitative research.

III. RESULTS AND DISCUSSION

This meta-synthesis aims to describe inclusive teaching in adapted physical education and its key factors that influence effective practices across diverse educational settings. Three primary themes emerged with their corresponding sub-themes.

A. Inclusive Strategies

An inclusive physical education environment is not all about special needs students. There is a need to employ certain teaching techniques that eliminate barriers and engage all to contribute in a useful manner, according to ([19], [55]), who emphasized that inclusion in PE means providing equal opportunities for all learners to participate meaningfully regardless of their abilities or backgrounds. The findings reveal two subthemes: (1) Instructional Strategies and (2) Environmental and Communication Adaptations.

Instructional Strategies

Developing an inclusive setting demands differentiated instruction, collaborative planning, and contextual adjustments within instructional practices. References ([19], [48]) note that differentiated instruction, such as the adjustment of activities and assessment, enables students with special needs to participate actively in PE while catering to their distinctive strengths and weaknesses. This is consistent with [55], who point out that teachers' ability to modify instructional material and strategies is crucial for guaranteeing appropriate participation by students with special needs.

Communication modifications, i.e., the application of visualizations, demonstrations, and short instructions, are needed to facilitate understanding and engagement, especially in students who have hearing impairment or intellectual disabilities. The research on instructing PE in students who have hearing impairments demonstrates how these modifications facilitate better delivery of instructions, hence easier learning by students. According to [48], this is consistent with the application of pedagogy that is enhanced by physical literacy, which builds learners' competency and confidence for active and prolonged engagement in physical activities.

Organized and secure learning settings also play an important role in successful inclusive instructional practices. Reference [19] emphasized that rural-adapted PE teachers' lived experiences reveal how having explicit routines and structured learning patterns minimizes anxiety and enhances willingness to learn among students with special needs. In alignment with this, the provision of regular PE to disabled students necessitates organized instructional methods that accommodate learners' differentiated rates and enable customized progress.

Throughout these studies, there is wide agreement that inclusive pedagogic approaches work best when they involve effective communication, organized learning spaces, differentiated activities, and group participation. References ([55], [19], [48]) affirm that when students comprehend instructions, are assisted, and receive adaptive and interactive learning experiences, their engagement and performance in PE greatly enhance.

In addition, systemic consistency and teachers' capabilities are still essential for maintaining inclusive teaching practices. Reference [55] stressed that inclusive effectiveness is enhanced when teachers are aided by continuous training, peer support, and organizational frameworks that favor inclusion in MAPEH and PE programs. These are consistent with international guidelines for the use of Universal Design for Learning principles, guaranteeing multiple means of representation, action, and engagement in instructional approaches to address the variability of learner needs in PE contexts.

Environmental and Communication Adaptations

Establishing a supportive and collaborative platform, including teachers, support staff, parents, and administrators, is critical for the effective application of inclusive practices. References ([33], [7]) emphasize the point that inclusive strategies

flourish in settings where collaboration and mutual comprehension are paramount. Additionally, recent research identifies active partnership, community engagement, and intersectoral collaboration as being key factors that can lead to the effective application of inclusive education, particularly in full-service schools. Such collaboration helps bridge the gaps between schools and the community at large, establishing a more supportive and resourceful learning environment for students with diverse needs [45].

Under communication, the application of diverse communication tools, such as visual aids, technology, sign language, and clear instructions, facilitates learning among students with varying needs. References ([20], [7]) merely state that the tools are beneficial in breaking down communication barriers, particularly for Deaf, hard-of-hearing, and intellectually disabled students. Recent research also points to the importance of technology-based accommodations for inclusive education. Technology tools, such as digital note-taking systems that connect written notes to audio, offer students, particularly those who are apt to be distracted or cannot keep up pace in class, access to review recorded material for understanding. Mobile apps and websites that enable the creation of digital flashcards facilitate the learning of concrete information, such as vocabulary or math facts, and are readily accessible for free.

Moreover, interactive whiteboard software allows students to watch lessons in real time and as recorded material, facilitating homework and ongoing learning. These computer tools are especially helpful for students with special needs, allowing flexible and focused learning opportunities [26]. Moreover, in students with profound intellectual disabilities, effective communication interventions are also essential. Inclusive communication definitions, the implementation of early communicative skills, and the application of evidence-based, low-cost interventions in the classroom are highlighted as essential. Practical approaches include accessible assessment and interventions that can be implemented by teachers, families, and the wider community.

Sharing communication strategy information and engaging all participants in practical activity are promoted to enable significant interaction and participation by students with profound intellectual disabilities in inclusive settings [25]. Predictable, safe, and structured classroom settings are a cornerstone of making students feel at home and ready to learn. Reference [7] highlights this by pointing out that clearly communicated routines and peer-mediated strategies contribute towards the alleviation of stress and uncertainty for students with special needs, enhancing a more facilitative learning environment. Supporting the same, recent research highlights the pivotal role played by inclusive and safe environments in addressing problems encountered by students with special educational needs (SEN). For instance, bullying continues to be a problem, with students with SEN being most susceptible to verbal and social bullying, which is often the outcome of reactions from peers towards social skill deficits or variation in behavior. This highlights the need for family and teacher involvement in shaping protective and structured school settings that neutralize such threats [21].

Throughout all of the research, there is unanimous agreement that inclusive practices work best when communication is clear, environments are predictable, and community support exists. Demonstrative and visual communication, co-planning, and planned routines repeatedly emerge as critical components of inclusive PE. Reference ([54], [20], [7]) agree that when students receive clear instructions and are supported, their performance and engagement are significantly enhanced. Additionally, the implementation of Universal Design for Learning (UDL) principles continues to inform the inclusive adaptations. As described in the [10], providing multiple means of representation (visual, auditory, tactile), expression, and engagement allows all learners to access the curriculum based on their strengths.

B. Barriers to Inclusive Physical Education

Inclusive physical education (PE) is widely recognized as essential for promoting equitable participation and holistic development among students of all abilities. Yet, despite its acknowledged benefits, the implementation of inclusive PE remains fraught with significant barriers. By examining these interrelated obstacles (1) Systemic and Policy Barriers ([19], [48], [23], [54]) and (2) Human Resource and Training Barriers ([19], [63], [48], [23], [55], [68]), this will illuminate the complex landscape that shapes inclusive physical education and to identify pathways for more effective and equitable practice.

Systemic and Policy Barriers

The lack of adequate training and professional development for physical education teachers is one of the primary systemic barriers. Several studies have concluded that insufficient training in adaptive strategies made some educators unprepared to teach students with special needs ([19], [48]). To support the idea, the study of [48] notes that teachers are not ready and reluctant to handle students with special needs because PE teachers lack specialized knowledge when it comes to inclusive strategies. This is consistent with the findings presented by [20], which underscore that instructors instructing special needs students often lack proper training, thereby making the teaching process very demanding.

The second major problem is the lack of systematic guidelines and enforcement to ensure inclusive physical education. Research of [23] established that systematic guidelines are rarely present despite several educational institutions claiming conformity with inclusive education policy. In the same context, [19] observed that the inconsistency in the implementation of policy among various geographic zones generates disparities in the provision of resources, making some schools unable to include students with disabilities.

The existence of poor infrastructure and resources has been mentioned as systemic barriers. It is noted in the study of [19] that the implementation of inclusive education is faced with a number of barriers, such as a lack of special equipment, inaccessible facilities, poor teacher training, a rigid curriculum, and issues related to engaging and motivating students with special needs. MAPEH teachers encountered difficulties in acquiring essential equipment and materials, and therefore, students with special needs were hindered from attending classes. Besides, management and provision of personal support in inclusive classes were difficult for teachers due to the existence of large class sizes and time constraints. Moreover, [63] noted that the majority of educational facilities lack accessible facilities, adaptive equipment, and sufficient funding to support inclusive physical education programs. This is in agreement with [23], which noted that financial constraints typically limit schools to modifying the environment to suit students with disabilities.

Furthermore, there was no policy enforcement. Studies show that teachers view inclusive policies as rhetoric without tangible support [23]. Additionally, the prevalence of dual or concurrent roles of education and disability service providers leads to policy inefficiencies in policy implementation. Similarly, [54] study pointed out that the lack of coordination between government agencies and schools leads to fragmented support for inclusive physical education.

A study conducted by [27] confirms these observations, noting that a large number of educators are not well prepared to adapt activities or tests to accommodate students with disabilities. The research further noted that a lack of training encourages the use of conventional pedagogical practices, which tend to exclude students with diverse needs. Notably, the issue can be attributed to poor policy implementation and a lack of resources, both of which restrict the support of inclusive physical education. The research further documents the necessity of the establishment of uniform national policies to facilitate equitable access to inclusive physical education. Consequently, there is a need to design a systematic teacher training program to facilitate the efficient management and implementation of inclusive physical education [72].

Human Resource and Training Barriers

Literature indicates that there are human resource and training issues that affect the delivery of inclusive adapted physical education (APE). One of the commonalities in the studies is that most physical education (PE) teachers lack specialized training, which restricts their capacity to include students with disabilities. A study of [19] established that most PE teachers lack specialized training in adaptive teaching techniques, resulting in ineffective instruction for diverse learners. This is further supported by [63], who established that the absence of formal professional development programs renders teachers unprepared to make activity modifications or employ assistive technology.

The second is the scarcity of APE staff. Research of [55] discovered that most schools lack APE specialists, and general PE teachers have the responsibility of including students with disabilities without the requisite expertise. This concurs with what [48] stated, that even when trained personnel are present, excessive student-to-teacher ratios result in students with disabilities not being able to access the one-to-one support they require in order to be fully included.

There are also attitude problems in teachers that are responsible for these structural barriers. A study [23] found that teachers perceive inclusive APE as an extra burden mainly because they do not perceive that they are skilled enough, and as such, they are resistant to implementing inclusive practices. Also, [68] found that the absence of adequate training makes teachers feel incompetent and often results in unintentional exclusionary actions, in spite of regulations for inclusion. A study [70] also supported these findings in his study, which shows that the lack of training for teachers before and after employment, and not having regular professional development, is an important barrier to inclusive APE. The study also highlighted the significance of systemic support like mentorship programs and hands-on training to make teachers feel more capable and confident to teach inclusively.

Commitment to Inclusive Values and Collaborative Practice in Physical Education

In other settings, educators placed inclusion as a moral obligation for inclusion for everyone and not a choice. Ghanaian physical education instructors, for example, described inclusive physical education as a right for every learner even when there were no suitable resources or training to apply it in its entirety [54]. Indonesian primary school teachers also placed emphasis on commitment to inclusive values, beginning with studying their students as individuals and considering disability as a normal part of everyday classroom diversity [68]. Ultimate support for them in leading meaningful lives views the need to establish inclusive schools because it plays a vital role in securing that these students with special needs would be able to be involved, contribute, and gain benefit from wider communities [30].

Implementing inclusive education entails providing teachers with sufficient training and resources, tailoring teaching procedures and instructional materials to the diverse needs of students with special needs, and generating policies of inclusivity at the school system level. In line with this, administrators, lawmakers, educators, stakeholders, and the entire school community must dedicate themselves to commitment and collaboration that would benefit students with special needs [8].

Peer and co-teaching models were shown to be effective strategies to achieve inclusion consistently. Canadian teachers utilized peer mentoring and activity stations to make sure that those who have intellectual or physical disabilities are there in the program, just like everybody else [33]. In the same manner, Indonesian teachers utilized peers as co-teachers and the family members as co-creators in the activity modification [68]. It takes a collaborative and understanding environment to implement effective inclusion in physical education. This kind of environment must be involved with educators, students, parents, relatives, and other vital people in the school community to overcome inclusion obstacles and generate an ecosystem of support and acceptance. Professional development programs and best practices, based on field experience in special education, are necessary to provide teachers with the skills and knowledge required to better manage the demands of inclusive teaching ([28], [18]).

The commitment to inclusive values and collaboration practices theme generated 3 sub-themes.

Belief in Inclusive Education as a Right

Research on Ghanaian, Canadian, Indonesian, and Philippine physical education teachers is focused on a well-stated rights-based advocacy for inclusion. Teachers in Ghanaian secondary schools described the engagement of students with disabilities as a right to full participation for all learners even while recognizing their limited knowledge and resources [54]. Canadian primary education specialists articulated their mission as providing every child a movement voice and they defined inclusion as fundamental, not an afterthought [33]. Indonesian primary teachers considered disability to be ordinary classroom diversity and stressed that every child deserves the same lesson [68]. Filipino PE teachers described a transformative commitment towards inclusive and equitable education appealing to moral responsibility as the impetus of their practice given the limited resources [48]. Inclusive Physical Education and physical activity initiatives in schools are designed to provide equal opportunities for all students, including those with disabilities ([44], [56]).

Inclusive school environments cultivate attitudes, values, and skills necessary for diverse societal integration [38]. Teachers contribute to inclusive education by designing adaptive educational strategies, encouraging collaboration, and utilizing available resources [66]. These cooperative actions, like the favorable dispositions of PE teachers towards inclusion [3] and the inclusive education program with the focus on the necessity of better physical education facilities for all learners [50], are critical to education systems. It must be pointed out at the start of this project that transformational and inclusive physical education is of

utmost significance. Not only is it a means of improving learning of motor skills and total physical health but also it promotes a culture of respect for each other, empathy, and flexibility among the members [20].

Collaborative Efforts for Inclusion

Canadian teachers operated peer-mentoring stations, co-taught circus arts with music/drama faculty, and met 3-5 times annually in a divisional community of practice [33]. Filipino participants spoke about relational support by peers and administrators as significant to managing inclusion challenges [48]. Indonesian teachers advised frequently with special-school peers, parents, and classroom teachers prior to modifying lessons [68]. Ghanaian teachers requested joint planning teams with special-education specialists and ongoing professional development to make up for skill deficiencies [54]. In acknowledging the promise of inclusive rights, it relies on layered collaboration among teachers, professionals, families, and community stakeholders. Swedish focus-group results show that veteran PE teachers routinely co-plan classes with students in wheelchairs, integrating peer support and adaptive routes to facilitate full participation [7]. This approximates planning a systematic review by [58], in which co-teaching and peer tutoring are cited as effective collaborative approaches that foster engagement and socialization among students with special educational needs (SEN).

Qualitative interviews with Filipino teachers of learners who are deaf highlight a parallel strategy: visual cue cards, tactile signals, and sign-language interpreters are deployed through team teaching and peer mentoring to dismantle communication barriers in real time [20]. This aligns with the [10] guidelines, which emphasize the need for interdisciplinary coordination among adapted physical educators, therapists, and families in creating inclusive physical activity environments.

Canadian research on physical-literacy-enriched pedagogy underscores the institutional side of collaboration; districts that invest in professional-development days, designate PE coordinators, and enlist parents report holistic gains in student competence and confidence across ability levels [33]. This institutional support is critical, [58] also notes that professional development and resource allocation are key to fostering inclusive pedagogy.

The Chilean case studies help develop the analysis of collaboration by demonstrating that systemic coherence defined by flexible curricula, open infrastructure, and efficient communication channels can only be attained if teachers, administrators, and government agencies work together in concert towards a shared vision [23]. This systemic view is supported by research emphasizing the necessity of coordinated policies and shared visions among stakeholders to overcome barriers to inclusion [2].

Philippine MAPEH findings reinforce this system's approach: teachers lacking specialized equipment nevertheless leverage school networks and parent volunteers to adapt activities creatively [19]. This aligns with broader literature advocating for active parent-teacher partnerships and community involvement as critical enablers of inclusive physical education [2]. Collectively, literature attests that successful inclusion is a collaborative effort wherein working together is robust, instruction improvisation is fruitful, and students with different needs enjoy more enhanced, more valued participation.

Emerging Commitment Despite Limitations

Inter-professional collaboration was promoted in Ghana where a lack of teaching assistants and adaptive equipment was a significant drawback; authors suggested common planning between PE staff, special educators and administrators to achieve inclusive plans [54]. Teachers' lived experiences disclose an emerging but precarious commitment to inclusive values that continues even in the face of chronic training, time, and resource shortages. Phenomenological interviews of New Hampshire adapted-PE teachers movingly disclose the tension: while educators express unwavering commitment, they report struggling with enormous class sizes, behavior nuances, and inadequate paraprofessional assistance [63]. This is in keeping with the larger literature on special education teacher persistence, where teachers exhibit impressive resilience despite "increased workload, limited training, lack of support, and inadequate resources" that cause stress and burnout. Research about special education teachers consistently demonstrates that teachers who continue in the profession do so despite rather than because of working conditions, with external support such as administrative support and personal passion for students serving as powerful incentives [60].

Ghanaian survey studies verify these limitations philosophically, teachers tend to believe in inclusion but acknowledge their preservice training barely touches on adaptive methods, and thus they end up making it up on the gym floor [55]. An extensive study of inclusive physical education challenges concluded that "inadequate teacher training" always tops the list of challenges, with studies verifying that "only about 20% of teachers reported having received specialized training" [15].

Filipino physical education teachers report the same improvisation, developing customized strategies and tapping into informal peer networks following failed formal professional-development activities [48]. This improvisation is part of a larger trend reported in systematic reviews, where teachers adapt resourcefulness and creativity in evolving teaching styles despite limited formal training [58].

Adaptive pedagogical strategies research reveals that effective inclusive teachers tend to make micro-adaptations including modified obstacle courses, part-part-whole teaching styles, and motor skill activities adapted to individuals, when faced with participation barriers [7]. Research on teacher improvisation in inclusive classroom settings reveals that teachers make concrete concepts, modify equipment and facilities, and minimize interference to increase student participation in the absence of resources [57].

Both Chilean and Swedish research indicate that inclusive orientations can dissolve when institutional supports fail, but teachers generally overcome deficits through tireless micro-adjustments like adapted obstacle courses or partial-participation contracts [23]. Swedish research specifically documents how PE teachers "adjust their teaching style and lesson content" by organizing parallel activities, using small group formats, and providing individual adjustments even when "not all PE teachers planned their adjustment strategies in advance" [7]. This adaptive ability is evidenced by the fact that inclusive-commitment teachers tend to create "optimally challenging situations for students and prioritize capability over disability [61].

Research on inclusive PE practice indicates that committed teachers consistently adapt activities during PE lessons and demonstrate willingness to enable participation for students with disability [7]. Indonesian primary school studies provide a positive note, mentioning that teachers who deliberately try to move beyond education goals by prioritizing students' welfare are likely to sustain their inclusive enthusiasm even in conditions of material scarcity [68]. This is supported by research into inclusive classroom teacher motivation, which finds that intrinsically motivated and value-driven teachers with high values of students' wellbeing over mere performance outcomes are more likely to stay in the profession despite adversity [61]. Research on inclusive pedagogical commitment shows that educators who embrace strength-based practices and emphasize the development of all students have reported higher job satisfaction in the presence of budget constraints [50].

C. Meta-theme: Addressing Barriers Through Inclusive Practices and Sustained Commitment in PE

The meta-theme "Addressing Barriers Through Inclusive Practices and Sustained Commitment in PE" obtains an engaging interaction between instructional strategies, barriers, and the dedication of educators and stakeholders in facilitating inclusive physical education. Inclusive teaching practices such as individualized and differentiated instruction, peer-to-peer learning, and tailored communication are evident to be effective in the promotion of an equitable and meaningful learning environment for students with diverse special needs ([19], [48], [55]). However, educators are still challenged by the insufficient training, limited infrastructure, and poor enforcement of the policies, which obstruct the full attainment of inclusive goals ([20], [23], [63]). Despite these barriers, the literature steadily highlights the sustained commitment of educators and school communities through cooperation, improvisation, and inclusive values that strive to create a more supportive and adaptive learning environment for students with or without special needs ([7], [68]). This continuing commitment, though at times tested by challenges in resources, emphasizes the potential for an inclusive physical education, especially when it is supported by a strong policy, professional development, and cooperation among the different stakeholders [33].

Practical Implications

Inclusive physical education in the themes of access, relationship, and achievement has practical applications that necessitate an intensive, multi-level effort involving instructional innovation, systemic reform, and sustained commitment. Schools and other educational institutions must formulate structured professional development programs that train teachers with

differentiated instruction techniques, Universal Design for Learning principles, and collaborative teaching models, and invest in adaptive tools and accessible facilities to eliminate physical barriers [58]. For systemic and training concerns, schools require dedicated funding streams for adapted physical education services, uniform policies with clear implementation instructions, and recruitment strategies to compensate for the shortage of specialist personnel, supported by teacher preparation programs before and during service that incorporate inclusive education principles throughout their curriculum [41]. Sustained success of inclusive practices hinges on the establishment of institutional cultures that support inclusive education as a fundamental right, as demonstrated by mission statements, leadership commitment, and established collaboration protocols between teachers, families, and community partners, as well as provision of emotional support and professional recognition to maintain educator enthusiasm despite implementation difficulties [16]. These intensive efforts must be supplemented by communication adaptations such as visual reminders, assistive technologies, and structured learning environments that minimize anxiety and facilitate meaningful participation for all students with varying needs [5].

IV. CONCLUSION

Inclusive physical education is effective when it is systemic, collaborative, and value-oriented. Individual strategies and teacher commitment are critical, but long-term success requires institutional investment in professional development, comprehensive policy frameworks, budget allocation, and coordinated stakeholder activities. However, with ongoing dedication and concentrated efforts, inclusive PE has the potential to improve not only educational experiences but also social integration for special needs students. Closing the gap between policy and classroom practice remains a serious concern. As a result, it is recommended to future researchers to evaluate policy implementation and institutional support by examining how inclusive physical education (PE) policies are interpreted, implemented, and monitored at the school level. This includes assessing the effectiveness of enforcement mechanisms, accountability structures, and the coordination between education departments and disability services.

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