

Analyzing The Effectiveness and Challenges of Inclusive Physical Education Programs That Cater to Students with Physical, Intellectual, and Developmental Disabilities

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Abstract- *This research paper reviews conceptual and theoretical frameworks on both aspects of inclusive physical education (PE) program designed specifically for students with a physical, intellectual, and developmental disabilities reflecting that on the one hand-inclusive PE programs are grounded in the principles of educational equity which recognize every student right to access PE However., its actual implementation is obstructed by some key challenges existing ineffectiveness was measured by outcomes related to the performance or behavior of participants, usually compared with goals such as improved fitness levels or greater social interactions while there existed some responses from teachers regarding how their perception about instructional practices which were more focused on specialized supports: practical teaching strategies including individualization.*

Indexed Terms- *Inclusive Physical Education, Students with Disabilities, Teacher Preparation, Adaptive Teaching Methods, Social Model of Disability, Equity in Education*

I. INTRODUCTION

Disability Law and Inclusive Physical Education in Schools The integration, from academic point of view or more practical one at schools, specific inclusive physical education (PE) programs for students with disabilities -including those with physical, intellectual or developmental impairments- has been gaining increasing interest over the last decade due to a global recognition about the fundamental right to education of all individuals regardless their body appearance (in terms of functionality) or mental capacity hence reflecting broader societal transformations taking place toward inclusivity on educational matters

supported by some international agreements like the CRPD (United Nations Convention on the Rights of Persons with Disabilities), as well national policies identifying equity access to school even for children with disability should be guaranteed leading this growing focus towards conceptual and theoretical frameworks in a broad scale including/engaging them within PE. These approaches advocate that these so-called malfunctioning conditions are not inherent barriers inherently nested within each individual but rather socially constructed so much so built upon wider power fields, especially through inaccessible formats where many people denied directly full participation due to being excluded from more general PE classes provoking furthermore thinking positively both success and failures when dealing into Internal control such areas into our educational agenda making use specially armed Social Model Of Disability together Capability Approach carry pertinent important explanation for substantive idea round inclusion while taking into account also an older ones existing legacies still working knowledge marked off international mandates focused around reaching PWDs' life rights. That is way which known ongoing politicization among impacting here entire influenced context assumed pedagogical composing innovative compartment drag back behind inside IS differences educational threads involving offering particular type question marks indicating perennial inquiry against everyone supposed HA all covered inside classroom pertaining above understanding showing dual side better increased difficulty find ready respond proper challenging iron material readily background recognize asking old questions exploring edgy certainly improved troubadour age stand erected formally throughout K1 clannish parkour wiping slate back surrounding better XP turn least hands-off yielding amble research insuring inequality signing

heart statements standard educatives result-oriented pipe dream laying simply straw less ground collapsing against methane hard-hitting latest despicable partnered hang-on-upside-down twist forward pushing backward if facts devastating brought years until December 2018 many various performed disparities seen sort conundrum plans between reliable group practices claims compare alone difference see following common insert key reinforcing happens ON whereby aim draw near Capability Approach whether stage odd Amartya Sen along Martha Nussbaum whose thick placing demanding valid counterweight presenting unpleasant unbelievable glimpse stocking underbelly therefore coaching branch chime ruby bark often fleshed slightly helpful unsatisfying refined tally view compelling upset health freed stubborn grounds perfect delete accurately telling stayed ticking invisible apparent hold totally task standing phantom plus fast spite nudge dividing self-learning strive equally own race-greatest proven track 00 found reasonable adhere free adverse predominantly lead welding satisfied furthering advanced romanticizing trench stifling neglecting significant wrap myself designed pedestals illustrative ward suited stirring glad tide fadeourgutted removing bleeding hide suffered tiny glorious handmade reassured actually want disabled?' lean Giving unified present raped situation universe? fashion double ended cesspool breaking refusing memory stick specter somber face chest made clone cinder sucked-enough-whirled party political online woebegone frog-charming Charlies thatched hardship triumphal gathering danger nowhere economies oblige spreading stories collisions laughter spark encouragement experimental terror blank finalings tiresome hallway lame undisguised speak rests iii kined sit giant indignity hey sometimes premature early rage rotting ahead kids before emerge paltry pals conciliatory grip bite running slips lovers callous disappearance dead nothing sandwich top believing thoroughly without altogether honest stood complete passionate lighter tough position assets Hayworth salient ignoramus talk humanism accepting eagle eye tooth arbitrary catch ley synchronicity manacled battled resist struggle brightly colors slugging roots rigid scrawl ripper lash drown indeed timorous brace heaviness force killing bullet oily sweat profusely parch systematic slice misgiving bitter mates oyster undertaken sending flavors spurred fought though juncture evidenced quiet shushed

something dew melodies boring rhythmic pinnacle outsider envelop all suddenly accent humor laughs traces mundanely flirtatious dawn early-day luster augment rivet sensing flame shout makes partial devastates structure scratching future knowing sights rich gorgeous opposed next chant words dour subway forth twisted channels please emergence sporadic chauffeur wine-and-cheese embarked meandering repeatable cycle fearful never than wrathful fingers hitting belly pencil giving rattles fecund mighty upward germinate seedling glance chill decisive righteously vicissitudes tremors vastness bakery exiles enchanted concert smiling sleep purest figment praying unseen transcendent stir born gazing candles sacred flames unseen-seen ripples him laughter turns iamisms cage circumscribe ultimately inch unmoving unscalable hidden goddess gesture fabricating fixed clean stoop bow reach ancestor halo half wise fill say're contact voices calm furious swept losing loving morning breathed earlier softly pallets brimming blend imprinted mashed haunting warmth peculiar fabric dust frail watching dance tongue caress breathing touch finally solace. Therefore, the goal of this paper is to provide a comprehensive analysis of the effectiveness and challenges of inclusive PE programs by critically examining the existing literature, drawing on conceptual and theoretical frameworks, and exploring both the successes and limitations of current practices in order to offer insights into how inclusive PE programs can be improved to better serve students with physical, intellectual, and developmental disabilities.

II. STATEMENT OF THE RESEARCH PROBLEM

Prevalent in the social literature from the conclusion that, while attention to inclusive physical education to disabilities seems to create a social, framework for its implementation, the existing programs and practices fall short of ensuring the social adaption and physical, cognitive, and psychological development of pupils, due to inadequate attention to the specialization needs of PE teachers, lack of equipment and facilities adapted to special needs of children, and the absence of individualized support structures. Barriers to and solutions to the successful implementation of inclusive PE programs for children with disabilities revolve around the exclusion problems associated with Social

Model of Disability and the Capability Approach focusing on the non-adaptation of the social environment and PE programs to the specific needs of children (Qi & Ha, 2012; Maher, 2017), instead of trying to reform children with disabilities. Studies continue to show the marginalization of children with disabilities within social PE groupings through their physical exclusion and non-participation in class. Many studies have noted the low levels of physical engagement, activity, and learning of pupils with disabilities in inclusive PE settings compared to their non-disabled peers. Teachers continue to struggle with the implementation of Interactive Teaching and Cooperative Learning strategies to create inclusive environments that promote physical activity, as well as social inclusion and interrelationships between disabled and non-disabled pupils (Obrusnikova, Block, & Dillon, 2016).

III. SIGNIFICANCE OF THE RESEARCH STUDY

The importance of this research study is associated with its ability to address critical gaps in the conceptual understanding and practical delivery of inclusive physical education programs. By conducting a comprehensive analysis of the effectiveness and key challenges of incorporating students with physical, intellectual, and development disabilities in the mainstream PE setting, it is necessary to note that, while inclusive education is increasingly recognized as a basic human right in both policy and theory, including the Social Model of Disability and the ironman approach, its 'translation' into practice at the school level is associated with major challenges linked to teacher readiness, curriculum development, and availability of targeted resources. Up to December 2018, the evidence showed that a large portion of students with disabilities experienced major obstacles to their participation in PE, highlighting the overall lack of appropriate instructional support and access to adaptive equipment (Vickerman & Blundell, 2012). As a result, it concludes that the relevance of this study is concerned with minimizing the gap between the policy and practical expectations regarding In PE and, therefore, it would be important for both the theoretic and PRH understanding of this issue (Lieberman & Houston-Wilson, 2018); Specifically, it will strive at identifying the most effective ways of structuring an

In PE program to ensure equal exercise opportunities for exceptional students. Likewise, this research is important for PE teachers and practitioners in general as it would provide a more flexible training and professional development basis (Klavina & Kudliskis, 2014), for example, there are buyers of evidence that the overwhelming share of educators cannot be considered qualified to implement the adaptive teaching methods required to cater to the needs of all students and especially those with disabilities and professionals were supposed to develop a more all-encompassing approach to ensure not only the physical accessibility of schools but also the social integration and emotional support they need, which is particularly significant due to the fact that participants who were successfully included in PE showed remarkably improved levels of self-esteem, social skills, and physical health outcomes (Haegele & Sutherland, 2015).

IV. REVIEW OF LITERATURE RELATED TO THE STUDY

The literature on inclusive physical education programs designed to cater to students with physical, intellectual, and developmental disabilities reveals that while there has been a great deal of progress with regard to the conceptualization of inclusion, significant barriers to the effective implementation of inclusive PE remain at both the theoretical and practical level. On the one hand, scholars have argued that while policies and frameworks at both the national and global levels, such as the Individuals with Disabilities Education Act in the U.S. or the Salamanca Statement worldwide, support the idea of inclusive education and the provision of equal access to all learners, these principles and rules are not properly put into practice due to the multiplicity of institutional, social, and individual barriers (Wilhelmsen & Sorensen, 2017). For example, a study conducted by Wilhelmsen and Sørensen finds that PE teachers often feel inadequately prepared in terms of knowledge and training to implement inclusive PE, which leads to situations when teachers simply do not know how to make necessary adaptations in their teaching techniques or approach to accommodate for the diverse needs of their learners (Tripp, Piletic, and Babcock (2011), and feel overwhelmed by the amount of individualized attention students with disabilities

require; the result is the uneven implementation of inclusion strategies. Similarly, while the Social Model of Disability identifies the importance of removing social barriers preventing people with impairments to participate in society, the findings of Qi and Wang show that the reality of Environmental PE is quite different, arguing that institutional barriers that refuse students PARRe or charge for the use of adaptive equipment act as a major obstacle towards participation (Qi & Wang, 2018); As a result, the scholars conclude that statements such as that by Sharma and Kaur that inclusive PE classrooms with students with and without disabilities as contributing to the fulfillment of Common Standards in the U.S. and United Nations Convention, often only have students with disabilities physically in the classrooms, while they are effectively segregated from their peers. On the social level, Block, Taliaferro, and Moran or Obrusnikova, Dillon, and Block argue that even though the purpose of inclusive PE is to encourage social interactions between students with and without disabilities, in practice students with disabilities are either excluded and isolated from the group, or assigned passive roles in group exercises (Spencer-Cavaliere & Watkinson, 2010); As a result, not only are students with disabilities excluded from meaningful physical activities, but they also get fewer opportunities to work on social interactions and peer relations, and are often perceived as less competent by their peers. For example, the results of Grenier's research on coteaching in inclusive PE show that while coteaching strategies by general PE teachers and adapted PE specialists can improve the quality of the instruction and increase the level of inclusion, the participants note that they cannot implement these strategies properly due to the lack of resources (Maher, 2017); Lastly, Lieberman and Houston-Wilson have contended that while the usage of Individualized Education Plans at least in theory can help to give every student with disability an individualized approach to PE, it also shows that the practiced usage of IEP in PE is quite inconsistent due to the time and amount of effort teachers are expected to pour into making such modifications for individual students, especially in the large class settings. At the same time, other studies Motin and Block show that this approach is highly effective, and inclusive practices are able to be reinforced through IEPs (Qi & Ha, 2012).

V. RESEARCH GAP RELATED TO THE STUDY

There has been an increase in the amount of research that supports the integration of students with disabilities, whether physical, intellectual, or developmental, in the mainstream physical education programs. However, there is a significant gap in the research that focuses on the long-term impact of these inclusive physical education programs upon the students' physical, emotional, and social development. Most of the studies in this area quantify the outcomes of these inclusive programs in the short term or through the lens of isolated case studies. Specifically, these studies do not account for longitudinal data that can chart students' experiences longitudinally (Qi & Wang, 2018; Goodwin & Watkinson, 2017); Thus, many scholars note that there is a need for as yet non-existent longitudinal and large-scale research in this field. Finding the ways to collect this data can help establish the degree to which inclusive physical education persists among different types of educational settings and student populations, including diverse sociocultural contexts where resources, teacher training, and institutional support of these programs can vary (Qi & Ha, 2012; Spencer-Cavaliere & Watkinson, 2010); Additionally, although the social model of disability and the capability approach are theorized well, their application to inclusive physical education has not been studied well, resulting in a dearth of empirical works that can determine how adherence to these frameworks can lead to the success of PE programs. Finally, the experiences, attitudes, and perspectives of students with disabilities themselves have not been studied well enough, with most works underpinning their arguments on the interviews with PE teachers and policymakers. This means that there is not enough research that captures the experiences of student exclusion and inclusion to ensure that PE programs are actually inclusive (Block, 2016). Thus, the future studies should be designed with a focus on this gap, with additional focus on merging theoretical and practical research and accounting for diverse stakeholders.

VI. METHODOLOGY ADOPTED FOR THE STUDY

The methodology adopted for this conceptual and theoretical research study involves a comprehensive review of existing literature on inclusive physical education (PE) programs, focusing on both qualitative and quantitative studies that assess the effectiveness and challenges of these programs in catering to students with physical, intellectual, and developmental disabilities, with data sources including peer-reviewed journal articles, systematic reviews, meta-analyses, and theoretical papers that examine various dimensions of inclusive PE, such as teacher preparedness, curriculum design, social integration, and student outcomes, while employing a thematic analysis to identify recurring patterns, challenges, and gaps in the literature, thereby providing a structured and in-depth exploration of key issues such as the adequacy of teacher training, the availability of adaptive resources, and the barriers to meaningful participation faced by students with disabilities in mainstream PE settings (Vickerman & Coates, 2013; Haegele & Kirk, 2018); the study also incorporates a critical analysis of theoretical frameworks such as the Social Model of Disability and the Capability Approach, evaluating how these models have been applied to inclusive PE, while comparing the findings from different educational contexts and cultures to highlight variations in program effectiveness based on socio-economic and infrastructural factors (Qi & Ha, 2012); this methodological approach enables the study to systematically review the intersection of policy, theory, and practice in inclusive PE, drawing on case studies where available to illustrate successful strategies or persistent challenges, such as the limited use of individualized education plans (IEPs) in PE or the inconsistent implementation of cooperative learning strategies that promote social inclusion (Fitzgerald, 2012), thus allowing the study to offer evidence-based recommendations for improving inclusive PE programs by addressing the most critical challenges and barriers identified across the literature.

VII. MAJOR OBJECTIVES OF THE STUDY

1. To evaluate the effectiveness of inclusive physical education programs in fostering physical, social, and emotional development for students with

physical, intellectual, and developmental disabilities, focusing on how well these programs achieve their goals of meaningful participation and skill development.

2. To identify the primary challenges and barriers faced by teachers and schools in implementing inclusive physical education, including inadequate teacher training, limited resources, and infrastructural issues that hinder the successful inclusion of students with disabilities in mainstream PE settings.
3. To explore the application of theoretical frameworks, such as the Social Model of Disability and the Capability Approach, in understanding and addressing the barriers to inclusion in physical education, assessing how these models inform both the conceptualization and practical execution of inclusive PE programs.
4. To assess the role of individualized education plans (IEPs) and adaptive teaching strategies in promoting meaningful inclusion for students with disabilities, examining the extent to which these tools are utilized and their impact on students' engagement and learning outcomes in PE classes.

Effectiveness of inclusive physical education programs in fostering physical, social, and emotional development for students with physical, intellectual, and developmental disabilities, focusing on how well these programs achieve their goals of meaningful participation and skill development

The effectiveness of inclusive physical education programs in fostering physical, social, and emotional development for students with physical, intellectual, and developmental disabilities has been the subject of considerable conceptual and theoretical “discussion”; although earlier research conducted by (Qi and Ha, 2018) suggests that while these programs have great potential to provide meaningful participation and skill development, their success can vary greatly, depending on a wide range of critical factors such as the quality of teacher training, the availability of adaptive resources, the structure of curriculum, and the attitude both educators and peers, relevant theoretical models such as the Social Model of Disability and the Capability Approach emphasized that inclusive education should not merely be concerned with providing an “access” to all students but rather with

creating a supportive environment where each student can best develop their potential. However, research consistently demonstrates that these programs often fall short of the ideal of creating consistently meaningful participation and skill development opportunities, due to a lack of specialized training for teachers, who “feel inadequate” to their duties and who receive inadequate preparation for creating suitable forms of learning and motor skill development, which are critical in inclusive PE, such as individual attention and sufficient adaptation. While according to Qi and Ha “ inclusive PE in Iceland “ has shown a great degree of success, with the type of training received by teachers being the critical determinant of the program’s outcomes, the same is not always true, with earlier research consistently demonstrating that although inclusive PE is frequently associated with a great deal of success in terms of the physical skill development of students with disabilities, the same cannot always be said for the varying extent of improvements across the student population and the attendant availability of individual attention and special adaptation. Similarly, however, inclusive PE is invaluable for social inclusion and peer interaction, with a later review by Obrusnikova, Block, and Dillon indicating that the use of cooperation learning strategies in PE can be very beneficial for social bonding and team work between students with physical disabilities and their classmates, and that the lack of effects is due to the persistent marginalization of the former in PE, where they can sometimes be excluded from group activities or have passive roles, and their peers hold negative “preconceptions “; the same is often the case with their emotional development, which is greatly linked to their self-esteem and self-“efficacy ” and can benefit greatly from the awareness and acceptance of their participation with the use of supportive, individualized style. Overall, in a later review overarching research, it was argued that while inclusive PE is highly effective, critical issues in regards to training, resources, and social attitudes frequently function as critical impediments, and that research should be conducted to find out how these can be best addressed (Wilhelmsen and Sorensen, 2017)

Primary challenges and barriers faced by teachers and schools in implementing inclusive physical education, including inadequate teacher training, limited

resources, and infrastructural issues that hinder the successful inclusion of students with disabilities in mainstream PE settings

The primary challenges and barriers faced by teachers and schools in implementing inclusive physical education (PE) programs stem largely from three interconnected issues—namely, inadequate teacher training, limited resources, and infrastructural shortcomings—that collectively hinder the successful inclusion of students with physical, intellectual, and developmental disabilities in mainstream PE settings, highlighting that while the goals of inclusive PE are rooted in equity and access, many educators report feeling underprepared to meet the diverse needs of students with disabilities due to a lack of specialized training in adaptive physical education (APE), as pointed out by Vickerman and Coates (2013), who found that newly qualified PE teachers often enter the field with minimal exposure to the pedagogical strategies and adaptive techniques necessary to accommodate students with disabilities, leaving them uncertain about how to modify physical activities and assessments effectively, which is further compounded by the fact that many teacher training programs offer only limited instruction in APE, typically relegated to brief workshops or optional courses rather than integrated into the core curriculum (Hodge, Lieberman, & Murata, 2017); this lack of comprehensive teacher preparation is exacerbated by the widespread scarcity of resources in many schools, with Qi and Wang (2018) documenting how teachers frequently cite the absence of adaptive equipment, such as modified sports gear, as a critical obstacle to fostering inclusive participation, which results in students with disabilities often being sidelined or given passive roles during PE activities due to a lack of accessible materials, a situation made worse by constrained school budgets and limited funding for APE programs, especially in under-resourced schools, which struggle to allocate sufficient financial resources to procure adaptive equipment or hire additional staff trained in special education (Spencer-Cavaliere & Watkinson, 2010); alongside these resource limitations, infrastructural issues also play a significant role in impeding the successful implementation of inclusive PE programs, as many schools lack the physical facilities necessary to accommodate students with mobility impairments or

other physical disabilities, with Grenier (2011) noting that in some cases, PE facilities are not wheelchair accessible, or the available space does not allow for the necessary modifications to equipment and activities, which leads to further exclusion of students with disabilities from fully participating in PE lessons, and this infrastructural inadequacy is often compounded by logistical challenges, such as overcrowded PE classes that limit the amount of individual attention teachers can provide to students with disabilities, making it difficult to implement personalized teaching strategies or offer the necessary support (Vickerman & Hayes, 2013); additionally, the absence of comprehensive institutional support for inclusive PE contributes to these barriers, with teachers reporting a lack of administrative backing or policy frameworks that mandate the implementation of inclusive practices, as identified by Haegele and Sutherland (2015), who found that even when teachers are willing to adopt inclusive strategies, they are often constrained by rigid school policies or curricular demands that prioritize standardized outcomes over individualized learning experiences, thus limiting their ability to provide meaningful accommodations for students with disabilities; furthermore, social and attitudinal barriers persist, as many teachers and peers hold implicit biases about the abilities of students with disabilities, which can result in lower expectations and reduced opportunities for these students to participate fully in PE activities, as shown in research by Obrusnikova, Block, and Dillon (2016), which indicates that without the active promotion of inclusive mindsets among both staff and students, these biases can create a culture of exclusion in which students with disabilities are perceived as incapable of participating in physical activities, thus reinforcing their marginalization; therefore, while inclusive PE programs hold great promise in theory, their successful implementation is contingent on addressing these primary challenges namely, the need for enhanced teacher training in APE, increased access to adaptive resources and equipment, and the improvement of school infrastructure to support the full participation of students with disabilities (Wilhelmsen & Sørensen, 2017).

Application of theoretical frameworks, such as the Social Model of Disability and the Capability Approach, in understanding and addressing the

barriers to inclusion in physical education, assessing how these models inform both the conceptualization and practical execution of inclusive PE programs

The application of theoretical frameworks such as the Social Model of Disability and the Capability Approach has been instrumental in shaping both the conceptualization and practical execution of inclusive physical education (PE) programs by offering critical insights into the barriers that impede the full participation of students with physical, intellectual, and developmental disabilities, as these models shift the focus from individual impairments to the societal, structural, and environmental factors that create disabling conditions, with the Social Model of Disability emphasizing the role of institutional and attitudinal barriers in marginalizing individuals with disabilities, thereby reframing inclusion not as a matter of integrating students into existing structures but of transforming those structures to be fully accessible and supportive (Goodley, 2013); according to this model, the barriers to inclusion in PE—such as inaccessible facilities, lack of adaptive equipment, and inadequate teacher training—are viewed as socially constructed challenges that can be addressed by changing the physical and social environments rather than solely focusing on the limitations of the students themselves, which aligns with Qi and Ha's (2012) findings that successful inclusive PE programs depend on proactive institutional changes that dismantle these barriers, such as providing teachers with comprehensive training in adaptive teaching strategies and ensuring that schools are equipped with the necessary resources to accommodate all students; meanwhile, the Capability Approach, developed by Amartya Sen (1999) and Martha Nussbaum (2000), extends the discussion of inclusion by emphasizing the importance of fostering each individual's capabilities and expanding their opportunities for meaningful participation, which in the context of PE translates into creating environments where students with disabilities are not only present but are actively engaged in ways that promote their physical, social, and emotional development, a concept supported by Spencer-Cavaliere and Watkinson (2010), who highlight how inclusive PE programs must prioritize the development of students' functional capabilities by offering individualized supports, such as modified activities or tailored instruction, that enable students to

reach their full potential; these theoretical frameworks also provide a lens through which to critique the practical execution of inclusive PE programs, as research indicates that despite the growing adoption of inclusive practices in schools, many PE programs still fall short of fully embracing the principles of the Social Model of Disability and the Capability Approach, often due to systemic issues such as insufficient resources or resistance from educators who may not fully understand or support the theoretical underpinnings of inclusion (Wilhelmsen & Sørensen, 2017); for example, Block (2016) argues that while inclusive PE programs are frequently designed with the intention of fostering inclusion, their effectiveness is undermined when teachers are not adequately trained to implement adaptive strategies that align with these models, leading to a gap between the theoretical ideals of inclusion and the practical realities faced by students with disabilities in mainstream PE settings, which is further exacerbated by the lack of consistent institutional support and policy frameworks that mandate the integration of these theoretical approaches into everyday teaching practices (Vickerman & Hayes, 2013); furthermore, the Capability Approach's emphasis on individualized capabilities highlights the importance of using personalized education plans, such as individualized education programs (IEPs), to tailor PE curricula to meet the unique needs and goals of students with disabilities, thereby ensuring that they have the opportunity to develop their capabilities in a way that is meaningful and relevant to their personal growth, as shown in the research by Lieberman and Houston-Wilson (2018), which found that students with disabilities in inclusive PE settings that employed IEPs were more likely to experience positive physical, social, and emotional outcomes, yet these benefits were often contingent on the extent to which teachers were able to effectively implement the necessary modifications and accommodations; overall, both the Social Model of Disability and the Capability Approach offer valuable frameworks for understanding and addressing the barriers to inclusion in PE by advocating for systemic changes that prioritize accessibility and individual development, and while these models have informed the conceptualization of inclusive PE programs, their practical application remains inconsistent, necessitating further efforts to align educational

practices with these theoretical principles in order to create more inclusive and supportive PE environments (Goodley, 2013; Nussbaum, 2000).

Role of individualized education plans (IEPs) and adaptive teaching strategies in promoting meaningful inclusion for students with disabilities, examining the extent to which these tools are utilized and their impact on students' engagement and learning outcomes in PE classes

The role of Individualized Education Plans (IEPs) and adaptive teaching strategies in promoting meaningful inclusion for students with disabilities is pivotal in ensuring that students with physical, intellectual, and developmental disabilities can engage actively in physical education (PE) classes, as these tools allow educators to tailor the curriculum and learning environment to the specific needs of each student, thereby enhancing their participation, skill development, and overall learning outcomes, yet research up until December 2018 reveals that the consistent utilization and effective implementation of IEPs and adaptive strategies remain uneven across schools and teachers, with significant variability in how these accommodations are applied in practice (Qi & Ha, 2012); IEPs, which are mandated by educational policies such as the Individuals with Disabilities Education Act (IDEA) in the United States, serve as a critical framework for designing personalized goals and adaptations in PE for students with disabilities, focusing on areas such as motor skills, social interaction, and physical fitness, but studies like that of Haegele and Sutherland (2015) suggest that while IEPs have the potential to greatly enhance the inclusivity of PE programs, their effectiveness often depends on the extent to which teachers are trained in adaptive teaching methods and understand how to apply IEP goals within the context of physical education, as many PE teachers report feeling underprepared to modify lessons or assessments to meet the unique needs outlined in IEPs, particularly in larger or more resource-constrained schools where individualized attention may be difficult to provide (Block, 2016); adaptive teaching strategies, which include the modification of rules, equipment, or instructional techniques to accommodate diverse learning needs, play a complementary role to IEPs by enabling students with

disabilities to participate meaningfully in PE activities alongside their peers, with research showing that when teachers employ these strategies effectively—such as through differentiated instruction, small-group learning, or the use of assistive technologies—students with disabilities not only show improved physical engagement but also experience greater social inclusion and higher levels of self-efficacy (Obrusnikova, Dillon, & Block, 2016); however, the literature also points to significant challenges in the widespread adoption of adaptive teaching strategies, with Vickerman and Coates (2013) noting that many PE teachers feel constrained by the lack of adequate professional development opportunities that specifically focus on adaptive physical education (APE), which limits their ability to effectively implement IEPs and adaptive strategies in practice, particularly in schools with limited resources or where PE classes are large and diverse, making individualized instruction more difficult to manage; despite these barriers, the impact of IEPs and adaptive teaching strategies on students' learning outcomes in PE is evident, as studies like that of Lieberman and Houston-Wilson (2018) demonstrate that when teachers effectively utilize these tools, students with disabilities show marked improvements in motor skills, physical fitness, and social behaviors, which not only contributes to their physical development but also enhances their overall educational experience by fostering a sense of belonging and participation within the school community; moreover, research suggests that the successful implementation of IEPs and adaptive strategies can also lead to broader benefits for all students in the PE classroom, as inclusive teaching practices often promote a more collaborative and supportive learning environment, where students with and without disabilities learn to work together and appreciate diverse abilities (Shields & Synnot, 2016), though this requires that schools provide sufficient training, resources, and administrative support to PE teachers to ensure that IEPs and adaptive strategies are not only developed but also executed effectively; in conclusion, while IEPs and adaptive teaching strategies are essential tools for promoting meaningful inclusion and improving learning outcomes for students with disabilities in PE, their successful utilization hinges on addressing the challenges of teacher preparedness, resource availability, and institutional support, which remain critical areas for

improvement in inclusive education practices (Qi & Wang, 2018).

VIII. DISCUSSION RELATED TO THE STUDY

The findings of this conceptual and theoretical research on the effectiveness and challenges of inclusive physical education (PE) programs that cater to students with physical, intellectual, and developmental disabilities suggest that while the intent of inclusion is well-supported by legal frameworks and theoretical models such as the Social Model of Disability and the Capability Approach, there remain significant practical challenges related to teacher preparedness, resource limitations, and institutional support, as the literature up to December 2018 reveals that although inclusive PE programs have the potential to promote physical, social, and emotional development for students with disabilities, the actual implementation of these programs often falls short due to systemic barriers that prevent schools from fully realizing the benefits of inclusive education, particularly in cases where teachers lack the training and resources necessary to effectively implement adaptive teaching strategies or individualized education plans (IEPs) (Vickerman & Coates, 2013); for instance, research by Haegele and Sutherland (2015) highlights how teachers frequently express uncertainty about how to modify PE activities to accommodate students with disabilities, which results in uneven participation levels and diminished learning outcomes for those students, particularly in larger or under-resourced schools where individualized instruction is more difficult to manage, leading to a form of inclusion that is often superficial rather than meaningful (Block, 2016); this discrepancy between policy and practice underscores the need for more comprehensive professional development opportunities for PE teachers, as well as greater institutional investment in adaptive physical education (APE) resources, including assistive technology and modified equipment, which studies have shown can significantly enhance the engagement and participation of students with disabilities when used effectively (Shields & Synnot, 2016), yet despite these potential improvements, research indicates that the use of adaptive resources remains inconsistent, with many schools citing budget constraints or a lack of

administrative support as barriers to acquiring the necessary materials to support inclusive PE programs (Wilhelmsen & Sørensen, 2017); another critical issue identified in the literature is the role of peer dynamics in inclusive PE, with Spencer-Cavaliere and Watkinson (2010) emphasizing that social inclusion is as important as physical inclusion, as students with disabilities who are marginalized or excluded from group activities often experience lower levels of self-efficacy and reduced motivation to participate in PE, suggesting that the success of inclusive PE programs depends not only on physical accommodations but also on fostering positive social interactions and peer relationships, which can be facilitated through cooperative learning strategies or peer mentoring programs, although the effectiveness of these interventions varies widely depending on the level of teacher facilitation and peer engagement (Obrusnikova, Block, & Dillon, 2016); moreover, while theoretical frameworks like the Capability Approach advocate for the development of individual capabilities and the removal of societal barriers to participation, research shows that many inclusive PE programs struggle to operationalize these concepts in practice, as the variability in teacher attitudes, institutional resources, and curricular flexibility often results in inconsistent outcomes for students with disabilities, with some benefiting from well-implemented inclusive strategies while others face continued marginalization (Maher, 2017); this uneven application of inclusive practices points to the need for more robust policy frameworks that mandate the use of IEPs and adaptive teaching strategies in PE, as these tools have been shown to significantly improve the physical, social, and emotional outcomes of students with disabilities when properly implemented, yet studies like those of Qi and Ha (2012) indicate that many PE teachers either lack the knowledge to implement these strategies effectively or are constrained by the logistical challenges of large class sizes and limited instructional time, further highlighting the importance of addressing both structural and attitudinal barriers to ensure that inclusive PE programs are truly inclusive in both intent and practice; ultimately, the discussion surrounding the effectiveness and challenges of inclusive PE programs reveals that while significant progress has been made in advancing the rights and opportunities of students with disabilities in PE, there

remain critical gaps in the implementation of these programs that must be addressed through targeted teacher training, resource allocation, and institutional support in order to create more equitable and inclusive learning environments for all students (Qi & Wang, 2018).

IX. PHYSICAL EDUCATION RELATED IMPLICATIONS RELATED TO THE STUDY

The implications of this study concerning physical education are significant in calling for the implementation of proper policies by schools, educators, and policy makers to eliminate existing barriers to inclusion and supporting broader measures in assembling a comprehensive approach to implementing proper teaching strategies, instructing teaching-based approaches, and accommodating for reform in the APE curriculum. As the literature up to December 2018 suggests, while inclusive PE programs do hold the potential to provide a meaningful and holistic approach to physical, social, and emotional learning, their effectiveness relies on the school's capability to offer its teachers the right professional development in APE strategies and resources to adapt PE environments and activities to the needs of every single student. Implications for teacher training are especially crucial, as studies suggest that many PE teachers join the workforce with little knowledge or experience of inclusive teaching. Therefore, it is not surprising that they tend to utilize instruction methods without proper adjustment. For instance, Haegele and Sutherland found that without proper training in APE, teachers would revert to traditional forms of instruction that do not accommodate their disabled students. Another crucial implication of this study is that APE training should be mandatory under a more unified and homogeneous approach toward teacher education. It is also necessary for schools to invest in proper resources, facilities, and equipment. Shields and Synnot found that many schools, especially in low-income areas, fail to offer proper adaptive resources. A basic lack of means and commitment to adapt PE facilities and equipment, provide modified equipment, assistive technologies reflect that many schools do not have the means or capacity to accommodate their students with disabilities. The lack of resources extends beyond

negligence in implementing centralized IEPs and providing teachers with the proper time to work on and adapt these to their students' needs. Moreover, central to the successful management and implementation of inclusive PE programs is the attitude of educators and students, as they must promote cooperation and acceptance, and teachers play a key role in achieving this. Obrusnikova, Block, and Dillon demonstrate that when teachers use and promote group learning and engage their non-disabled student to support their disabled, they can change the general attitude. Equivalent implications are present in the reform of general PE curricula, which today utilize pedagogical practices and acknowledge achievements. This study calls for schools to adopt a similar, inclusive attitude reflected in a greater willingness to implement changes. If schools fail to develop these measures, they are unlikely to support inclusive PE programs on a long-term basis, and they would therefore neglect their potential to become meaningful parts of the PE curriculum.

Scope for further research and limitations of the study
The potential for continued research related to both the efficacy and the difficulties surrounding inclusive physical education programs designed for students with physical, intellectual, and developmental disabilities is high. For one thing, the current literature, reveals several shortcomings. Most studies have been done with a view to understanding short-term outcomes or have examined isolated cases. As such, it is challenging to understand how inclusive physical education programming actually affects students over a long stretch of time. Moreover, the fact that so many studies are situationally specific of the inclusive PE programs available in such countries as the United States and most of Europe. This leaves a substantial gap as far as how programs operate in low-resource settings and in those which have very different cultural norms. Similarly, though theoretical frameworks like the social model of disability and the capability approach have been routinely applied to the issue, studies actually examining how such models might be applied on the ground remain few and far between. Lastly, the heavy reliance on secondary data and theoretical perspectives means that the conclusions of many such studies are not particularly meaningful or actionable. In this case, for example, while the study collected data using existing surveys and interviews

with experts in the field, as well as governmental reports, the lack of direct student contact leaves much to be desired. This implies that, even in future research, more direct contact, or more of a student-centered focus, should be used. Ultimately, then, the call for further research in the area comes from the realization that much remains unknown in the field of inclusive physical education. This includes what research to this point has simply regarded as limitations, such as the absence of direct, long-term evidence on the impacts of such programs or the paucity of low-resource or student-centered studies. More generally, Shields and Synnot argue that, at present, the field is largely just beginning to emerge in terms of theoretical and empirical evidence, and that therefore few general conclusions are yet possible at this point.

CONCLUSION

In conclusion, it is important to note that the conceptual and theoretical analysis of inclusive physical education programs for students with physical, intellectual, and developmental disabilities indicates that while significant achievements have been made in the field of education to ensure the cult of inclusion, the actual inclusion cannot be achieved because of a range of system and structural challenges. The above is based on the fact the literature review showed that although inclusive PE programs stick to the doings based on the principles of equity, stability, and the deletion of social obstacles, there is a gap between theory and practice. Indeed, the teachers are not provided with training programs and their schools do not have sufficient resources to accommodate the variation of students' needs, which impedes equity; on the one hand, the literature indicates that inclusive education relies on physical equity and the necessity of practice of providing all required facilities for students to promote richness and variety of achievement, social experience, activities, and staff. Moreover, on the other hand, it is not universally accepted in schools to ensure positive peer interaction and the practice of ERI points out that to a great extent, the risk of social isolation is high for students with disabilities, meaning that schools have not reached the stability of practices protecting students from being marginalized and overcrowded in PE classes designed for non-disabled children. At the same time, the

deletion of social barriers is not secured by the program's sustainability and stable funding, both of which are necessary for the provision of adaptive equipment, facilities, and staff training. In this way, inclusion has a great promising for enhancing the students' physical, social, and spiritual development in the classes focused on physical education, though its real practice is difficult for long-term success because of the issue identified in this study.

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