



# Challenges Experienced by Physically Challenged Learners in Practical Physical Education Classes in South Africa: A Systematic Analysis



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## ABSTRACT

This paper, framed within the interpretivism theory, argued that government, stakeholders, and policymakers could foster and promote policy advocacy to address the challenges militating against the participation of physically challenged learners (PCLs) in practical physical education (PE) classes. Despite the noticeable need for physical activities in the lives of PCLs, there are growing concerns that learners in physical education classes still face many challenges in practical classes. The research was a systematic review of literature that identified studies that focused on the challenges that PCLs experience in practical physical education classes. Data was gathered from a collection of relevant articles as well as 20 publications that were critically reviewed. Only ten publications were found to meet the inclusion criteria. As a result, four main themes emerged from the data as thematic analysis was adopted. The findings revealed that PCLs frequently encounter challenges such as inaccessible equipment, poor social support, the PE curriculum/programme, and a lack of teachers training in practical physical education classes, which can limit their ability to engage and fully participate in PE practical classes. The study contributed to the body of physical education studies by providing a framework for a more integrated Physical Education for Physically Challenged Learners (PCLs), which could be implemented all around the world. It recommends, among others, that the members of the executive councils, school management teams and policymakers should work together by providing schools with accessible equipment and strong social support for PCLs to feel less isolated and more supported. This study concludes that exploring these challenges and developing coping strategies can help to ensure that PCLs can participate and benefit from PE practical classes.

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## INTRODUCTION

Physically Challenged Learners (PCL) experience various challenges in highly diverse life orientation (LO) practical physical education classes. Thus, equitable education for PCLs has come to global attention in recent decades to help combat these challenges in general. One of the goals of the United Nations Sustainable Development Goals for 2030 is to ensure that all people have access to lifelong learning opportunities. Target 4.1 of the United Nations Goal 4 specifies that education is a fundamental right and must be provided for all, “without discrimination” and “particular attention and targeted strategies” should reach “learners with barriers to learning”.<sup>1</sup> Despite the

<sup>1</sup> Safdar Abbas, Muhammad Ashraf Nadeem, and Muhammad Iqbal Majoka, “The United Nations Sustainable Development Goal-4: A Case Study of Pakistan,” *Pakistan Journal of International Affairs* 4, no. 4 (2021).

international laws, PCLs, especially in South Africa still face challenges. In 1984, the South African government signed the Universal Declaration for Human Rights, which recognised education as a fundamental right for every person, including people with physical impairment.<sup>2</sup> The Convention on the Rights of Persons with Disabilities, enforced in 2008, stated the right of persons with disabilities to be given extensive opportunity to access education which is friendly to students with barriers to learning.<sup>3</sup> Such chances refer to things such as making all necessary equipment and environments that are supportive of the PCLs available on school premises. Despite all the local and international laws, PCLs still experience challenges in participating in physical education classes. These learners are usually perceived as a disadvantaged group by society. Broglio et al. point out that learners with special educational needs also experience limitations in physical education activities, and that affects their academic sphere.<sup>4</sup>

Physical Education (PE) is part of the life orientation curriculum that provides learners with the necessary skills to cultivate a healthy way of living by means of involvement in physical activities and to make learners able to take on physical recreation and sport as a lifetime commitment. Physical education periods are educational processes that use physical activities such as play, exercise, music, acting, and competitive games that will assist learners in gaining knowledge, skills, attitudes, and fitness that will add to their well-being, optimal development, and social interaction.<sup>5</sup> Studies by Mendoza et al. and Walton and Engelbrecht support participation in practical physical education classes because they play a typical role in the lives of both PCLs and able learners.<sup>6</sup> Conversely, Donohue and Bornman argue that contemporary schooling systems in South Africa have the potential to support greater participation by children with physical barriers to learning in practical physical education classes, but challenges remain.<sup>7</sup> Previous studies by Phasha and Mosia have shown that poor facilities, uneven play fields in schools, and unmodified equipment are problems that affect the participation of PCLs in physical education classes.<sup>8</sup> This study, therefore, explores challenges faced by PCLs in practical physical education classes to understand the effects they have on them.

Physical education has a huge benefit in learners' holistic growth and development. However, despite the noticeable need for physical activities in the lives of PCL, there are still many challenges in accomplishing these goals. Research by Ginis et al. indicated that an inaccessible school environment, insufficient training of school stakeholders, and negative people hinder PCLs' involvement in practical physical education classes.<sup>9</sup> Moreover, a previous study by Cruickshank et al. has shown that physical education in South African schools continued to be a marginalised subject.<sup>10</sup> Previous research by Whitburn and Thomas appeared to have focused more on challenges in accessing inclusive education than on practical physical education classes.<sup>11</sup> Thus, this study is seen as a significant contribution to the literature in the field. The following research questions are posed to address the problem of this study: 1) How do practical physical education classes pose a challenge to PCL? 2) What strategies can be implemented to support PCLs in practical physical education classes?

<sup>2</sup> Nancy Flowers, "The Global Movement for Human Rights Education," *The Radical Teacher*, no. 103 (2015): 5–17.

<sup>3</sup> Tobias Buchner et al., "Same Progress for All? Inclusive Education, the United Nations Convention on the Rights of Persons with Disabilities and Students with Intellectual Disability in European Countries," *Journal of Policy and Practice in Intellectual Disabilities* 18, no. 1 (2021): 7–22.

<sup>4</sup> Steven P Broglio et al., "National Athletic Trainers' Association Position Statement: Management of Sport Concussion," *Journal of Athletic Training* 49, no. 2 (2014): 245–65.

<sup>5</sup> Pieter Swarts, "Assessing Selected Teachers' Adaptions Towards an Adolescent-Orientated Life Orientation Curriculum: A Case Study," *Perspectives in Education* 39, no. 30 (2021): 169–82.

<sup>6</sup> Melissa Mendoza and Jody Heymann, "Implementation of Inclusive Education: A Systematic Review of Studies of Inclusive Education Interventions in Low-and Lower-Middle-Income Countries," *International Journal of Disability, Development and Education*, 2022, 1–18; Elizabeth Walton and Petra Engelbrecht, "Inclusive Education in South Africa: Path Dependencies and Emergences," *International Journal of Inclusive Education*, 2022, 1–19.

<sup>7</sup> Dana Donohue and Juan Bornman, "The Challenges of Realising Inclusive Education in South Africa," *South African Journal of Education* 34, no. 2 (2014).

<sup>8</sup> Nareadi Phasha and Paseka A Mosia, "Access to Curriculum for Students with Disabilities at Higher Education Institutions: How Does the National University of Lesotho Fare?," *African Journal of Disability* 6, no. 1 (2017): 1–13.

<sup>9</sup> Kathleen A Martin Ginis et al., "Participation of People Living with Disabilities in Physical Activity: A Global Perspective," *The Lancet* 398, no. 10298 (2021): 443–55.

<sup>10</sup> Vaughan Cruickshank et al., "Encounters in a Marginalised Subject: The Experiential Challenges Faced by Tasmanian Health and Physical Education Teachers," *Australian Journal of Education* 65, no. 1 (2021): 24–40.

<sup>11</sup> Ben Whitburn and Matthew Krehl Edward Thomas, "A Right to Be Included: The Best and Worst of Times for Learners with Disabilities," *Scandinavian Journal of Disability Research* 23, no. 1 (2021): 104–13.

## LITERATURE REVIEW

### ***Benefits of Physical Education to Physically Challenged Learners***

Renshaw and Chow refer to the word physical to the body.<sup>12</sup> This physical term is commonly used in characteristics of the body such as physical appearance, strength, prowess, health, and development. It refers to the mind as contrasted to the body. Therefore, when the term education is added to the word physical, it then forms the phrase physical education, which refers to the process of education in which the human body gets developed and maintained through the concerned activities. Hutzler et al. define physical education in academia as a systematic traction in sport, exercise, and hygiene that uses physical activity to assist learners in acquiring knowledge, fitness, skills, and attitudes that contribute to their well-being and optimal development.<sup>13</sup> In a similar way, WHO stated that schools can play a crucial role globally in promoting and providing opportunities for physical education activities among learners, which can lead to improved physical and mental health.<sup>14</sup>

Physical education has several benefits to both learners with and without physical barriers to learning regarding their holistic growth and development. Numerous studies by Bull et al. and Griban et al. have shown that PCLs generally have slim abilities to perform physical activities. A sedentary lifestyle and limited abilities to perform physical activities are often the result of shorter attention spans, motor development impairments, cognitive limitations, and lack of motivation.<sup>15</sup> It stands to reason that PCLs may benefit even more than normal-bodied learners in PE exercises in physical education; the benefits to both abled learners and PCLs have been recognised regardless of their physical, cognitive, and neurological ability. Campbell and Lassiter confirm that all learners need an energy outlet, as the benefits they can get are the improvement of physical fitness, reduced weight, healthier bone density, enhanced self-esteem, motor skills and health, improved emotional and psychological health and reduced risk of diseases.<sup>16</sup>

When learners participate in physical education, they get all these benefits and carry the added benefit of improving their self-confidence. It also helps develop their full potential for self-control as well as strengthen interpersonal skills such as teamwork skills. These benefits are also applicable to PCLs as they are to any other learner. In fact, research by Kong et al. points out that when a learner participates in PE practical classes, it not only improves their physical fitness, self-esteem, and social competence but also reduces maladaptive behaviour.<sup>17</sup> Similarly, Kapsal et al. add a situation wherein learners with intellectual disabilities were involved in a carefully designed physical education class, and the researchers reported improvements that are noticeable in the effective performance of motor tasks such as better limb coordination, improved muscle tone and strength, movement control, and spatial orientation.<sup>18</sup>

### ***Challenges facing physically challenged learners in practical physical education classes***

A previous study by Kasser and Lytle has shown that problems with PE in this specific educational context are related to more than simply a lack of adaptation in activities but values embedded in practices associated with barriers.<sup>19</sup> Researchers Wang and McGraph found that PCLs tend to experience exclusion from PE practical classes, which is typical of institutional factors, learner-related barriers, school equipment problems, lack of motivation to participate and negative attitudes and stereotypes.<sup>20</sup> Physically challenged learners often face many problems in their lives as set out below.

<sup>12</sup> Ian Renshaw and Jia Y Chow, "A Constraint-Led Approach to Sport and Physical Education Pedagogy," *Physical Education and Sport Pedagogy* 24, no. 2 (2019): 103–16.

<sup>13</sup> Yeshayahu Hutzler et al., "Attitudes and Self-Efficacy of Physical Education Teachers toward Inclusion of Children with Disabilities: A Narrative Review of International Literature," *Physical Education and Sport Pedagogy* 24, no. 3 (2019): 249–66.

<sup>14</sup> World Health Organization, *Promoting Physical Activity through Schools: A Toolkit* (World Health Organization, 2021).

<sup>15</sup> Fiona C Bull et al., "World Health Organization 2020 Guidelines on Physical Activity and Sedentary Behaviour," *British Journal of Sports Medicine* 54, no. 24 (2020): 1451–62; Grygoriy P Griban et al., "The Role of Physical Education in Improving the Health Status of Students of Special Medical Groups," *Wiadomości Lekarskie*, no. 73 (6) (2020): 534–40.

<sup>16</sup> Amanda L Campbell and Jill W Lassiter, "Teacher Perceptions of Facilitators and Barriers to Implementing Classroom Physical Activity Breaks," *The Journal of Educational Research* 113, no. 2 (2020): 108–19.

<sup>17</sup> Zhaowei Kong et al., "Tai Chi as an Alternative Exercise to Improve Physical Fitness for Children and Adolescents with Intellectual Disability," *International Journal of Environmental Research and Public Health* 16, no. 7 (2019): 1152.

<sup>18</sup> Nathaniel J Kapsal et al., "Effects of Physical Activity on the Physical and Psychosocial Health of Youth with Intellectual Disabilities: A Systematic Review and Meta-Analysis," *Journal of Physical Activity and Health* 16, no. 12 (2019): 1187–95.

<sup>19</sup> Susan L Kasser and Rebecca K Lytle, *Inclusive Physical Activity* (Human Kinetics, 2013).

<sup>20</sup> Lijuan Wang, "Perspectives of Students with Special Needs on Inclusion in General Physical Education: A Social-Relational Model of Disability," *Adapted Physical Activity Quarterly* 36, no. 2 (2019): 242–63; Ona McGrath, Susan Crawford, and Dan O'Sullivan, "'It's a Challenge': Post Primary Physical Education Teachers' Experiences of and Perspectives on Inclusive Practice with Students with Disabilities," 2019.

### ***Institutional Factors***

A study by Ubeda, Devis and Cindy highlighted various institutional barriers such as limited to no availability of resources, little or constrained school budget, a curriculum with reduced time provision, insufficient or absent professional development, a lack of equipment and a crowded curriculum.<sup>21</sup> Similarly, Xu et al. added that the three major institutional barriers were the lower priority given to PE, insufficient infrastructure, and absence of majors in physical education, which teachers in elementary schools identified as barriers to the provision of a curriculum that health and PE guidelines were capable of meeting.<sup>22</sup>

### ***Learner-Related Barriers***

A previous research study by Hutzler et al. has shown that a serious challenge that all PCLs face is mockery and derision by normal-bodied learners during practical physical education classes.<sup>23</sup> Physically challenged learners are often teased and taunted due to their inability to stand up for themselves or to perform other activities. According to Beauchamp, Crawford and Jackson, the challenges to participating in physical education may be explained partly by Bandura's social cognitive theory, which emphasises the association between the cognitive, behavioural and environmental factors that influence a person's choices, comprising those relating to PE activities.<sup>24</sup> These above-mentioned factors all influence learning and learners' participation, as well as their choices, although they are not independent but mutually dependent. Learners can be influenced by many things such as their classmates, teachers, the curriculum provided, their interaction in class, and engagement in the programme in the school environment, since they spend much of their time in school. The involvement and influence of these three factors on preferred behaviour start at the primary level, wherein they strengthen their own beliefs regarding PE.<sup>25</sup>

### ***Motivations of Physically Challenged Learners to Participate***

According to Ubeda-Colomer, Davis, and Sit, the motivation and attitude of PCLs are the most influential internal barriers observed in some contexts, mostly low levels of confidence and self-consciousness.<sup>26</sup> Trigueros et al. further explain that this lack of confidence and self-consciousness results in them feeling different from the majority of learners, feeling unable to fit in the PE activities, lacking confidence, and being self-conscious in asking for assistance in PE practical classes, and having a fear of failure.<sup>27</sup>

### ***Negative Attitudes and Stereotypes***

Ruiz-Montero et al. clearly stated that PCLs continue to face negative attitudes and stereotypes in the physical education programme. Lack of knowledge about and sensitivity to inability issues on the part of some PE educators, staff and other abled learners can make it problematic for PCLs to access physical activities equally.<sup>28</sup>

### ***Adapted Physical Education Teaching Strategies to be used in Supporting Physically Challenged Learners***

According to Winnick and Porretta, Adapted Physical Education (APE) refers to physical education that has been adopted or modified so it is appropriate for learners with different barriers to learning.<sup>29</sup> It is a programme that can be tailored to include activities that help to improve motor functioning but is also equally appropriate to all learners' needs. Adapted physical education was created to meet the needs of children with barriers to learning. It also helps integrate PCLs into typical PE practical classes by modifying activities, making it easily accessible for those who may struggle with practical physical education classes.<sup>30</sup> Aldabas states that inclusive education involves making changes or modifications to the PE curriculum so that all learners can participate, regardless of their abilities or needs. For PCLs, this means making the PE curriculum adaptive. To support those learners with barriers to learning in PE practical classes, any modifications made to the PE curriculum must be as minimally restrictive as possible

<sup>21</sup> Joan Úbeda-Colomer, José Devís-Devis, and Cindy H P Sit, "Barriers to Physical Activity in University Students with Disabilities: Differences by Sociodemographic Variables," *Disability and Health Journal* 12, no. 2 (2019): 278–86.

<sup>22</sup> Zhixing Xu, Jing Lin, and Siyong Xia, "Improving Quality Physical Education: Conceptual and Practical Framework, and Barriers to Its Global Implementation," *Beijing International Review of Education* 3, no. 2 (2021): 296–320.

<sup>23</sup> Yeshayahu Hutzler et al., "Physical Activity, Sedentary Screen Time and Bullying Behaviors: Exploring Differences between Adolescents with and without Disabilities," *International Journal of Adolescence and Youth* 26, no. 1 (2021): 110–26.

<sup>24</sup> Andrea R. Beauchamp, "Implementing Literacy Instruction Through Project-Based Learning" (Bethel University, 2023).

<sup>25</sup> Albert Bandura, "Social Cognitive Theory: An Agentic Perspective," *Annual Review of Psychology* 52, no. 1 (2001): 1–26.

<sup>26</sup> Úbeda-Colomer, Devís-Devis, and Sit, "Barriers to Physical Activity in University Students with Disabilities: Differences by Sociodemographic Variables."

<sup>27</sup> Rubén Trigueros et al., "The Dark Side of the Self-Determination Theory and Its Influence on the Emotional and Cognitive Processes of Students in Physical Education," *International Journal of Environmental Research and Public Health* 16, no. 22 (2019): 4444.

<sup>28</sup> Pedro J Ruiz-Montero et al., "Learning with Older Adults through Intergenerational Service Learning in Physical Education Teacher Education," *Sustainability* 12, no. 3 (2020): 1127.

<sup>29</sup> Joseph P Winnick and David L Porretta, *Adapted Physical Education and Sport* (Human Kinetics, 2016).

<sup>30</sup> Seo Hee Lee and Samuel R Hodge, "Experiences and Perspectives of College Students With Disabilities Toward Integrated Physical Education in South Korea," *Journal of Teaching in Physical Education* 42, no. 4 (2022): 665–73.

so that learners with physical barriers are able to participate.<sup>31</sup> However, it is also vital to allow PCLs to take risks just as their able-bodied peers do. Instead of overprotecting PCLs from experiences that may challenge them, the focus should be on empowering them to engage in ways that are appropriate for their needs.<sup>32</sup> Martino et al. comment that in the APE programme, the needs, interests, and abilities of PCLs must be considered.<sup>33</sup> The programme should include activities that are modified to include all learners such as modified aquatics, dance, individual as well as group games and sports. The modified strategies to be used in supporting PCLs utilise inclusive activities, using easier and lighter equipment, slowing down the speed of moving objects and simplifying rules. Based on the modified strategies suggested by Lieberman and Houston, one can simply create opportunities for the participation of PCLs in practical physical education classes.<sup>34</sup>

Careful preparation is required for PCLs to be educated fully in practical physical education classes. Two main factors to consider were identified when deciding whether to place a learner with physical barriers in a regular PE programme: You need to make sure that teachers who teach physical education to PCLs are professionally prepared and examine the attitude of the physical education teachers toward the PCLs.

Kelly asserts that in many countries, PCLs have access to a variety of opportunities to participate in practical PE classes.<sup>35</sup> However, this is not the case in every part of the world. Wilson et al. agree that if a wide range of activities can be adapted to suit all learners, especially those with physical barriers to learning, they can get as much enjoyment and fun from PE activities as non-disabled learners without experiencing any difficulties. Strategies that should be in mind when including PCLs in PE practical classes are the following: The ball size should be modified if learners cannot manage with the suggested one, and in activities where the object has to be touched, like a ball, for example, it should not be heavier.<sup>36</sup>

## **THEORETICAL FRAMEWORK**

Social constructivism is a learning theory propounded by Lev Vygotsky in 1968.<sup>37</sup> The theory emphasises the influence of social interactions, cultural settings, and shared meanings on how people view the world and the way they behave. This theory was applied as a fundamental theory to address the challenges faced by physically challenged learners (PCL) in practical physical education classes. The researchers used this theory in the study as social constructivism theory sees physical activity as learning, which is a social activity that is associated with other peers in physical education class. The social aspect of learning in social constructivism involves the interaction, conversation, and construction of knowledge and understanding as important aspects of learning among PCLs and other learners. This study argues that by applying social constructivism theory to the challenges faced by PCLs, the researchers will gain insights into the social, cultural, social, and political dynamics that challenged these learners in a practical physical education class. They also argue that the social constructivism theory can be used to understand how PCLs could navigate these challenges in the practical class to minimise the impact it has on them.

## **METHODOLOGY**

This research was based on a systematic review of the literature as well as an analysis of case studies, journal articles, books, etc. All articles are related to disabilities in the educational context and the adaptive measure.

### ***Research Approach***

This study used a qualitative research approach based on a systematic review of the literature. Deng et al. stated that a systematic review is inclusive and practical, allowing for the use of a wide range of data from different methodologies.<sup>38</sup> A qualitative research approach was appropriate for this study as it provided an opportunity for the researchers to learn and understand the feelings, perceptions and challenges associated with PCLs in practical physical education classes. Physical education is a practical subject, which means that it is a personal experiential subject, so integrating a qualitative research approach will allow a rich exploration of data on the individual side of PE, including the emotions and motivations of PCLs.

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<sup>31</sup> Rashed A Aldabas, "Special Education in Saudi Arabia: History and Areas for Reform," *Creative Education* 6, no. 11 (2015): 1158–67.

<sup>32</sup> Celina H Shirazipour, Alice B Aiken, and Amy E Latimer-Cheung, "Exploring Strategies Used to Deliver Physical Activity Experiences to Veterans with a Physical Disability," *Disability and Rehabilitation* 40, no. 26 (2018): 3198–3205.

<sup>33</sup> Luciana Martino et al., "Diversity as a Starting Point for 'Adapted Sport,'" 2019.

<sup>34</sup> Lauren J Lieberman, Cathy Houston-Wilson, and Michelle Grenier, *Strategies for Inclusion: Physical Education for Everyone* (Human Kinetics, 2024).

<sup>35</sup> Luke E Kelly, *Adapted Physical Education National Standards* (Human Kinetics Publishers, 2019).

<sup>36</sup> Wesley J Wilson et al., "Perceived Workplace Experiences of Adapted Physical Educators and Physical Educators," *Research Quarterly for Exercise and Sport* 91, no. 4 (2020): 618–29.

<sup>37</sup> Vera Idaresit Akpan et al., "Social Constructivism: Implications on Teaching and Learning," *British Journal of Education* 8, no. 8 (2020): 49–56.

<sup>38</sup> Tianjing Li, Julian PT Higgins, and Jonathan J. Deeks, "'Collecting Data.' Cochrane Handbook for Systematic Reviews of Interventions ." (2019).

### Data Collection Strategy

This study used the exploration of documents as a data collection strategy. Data was gathered from a collection of relevant articles as well as 20 publications that were critically reviewed. Only ten publications were found to meet the inclusion criteria. According to Li, Higgins and Deeks, document analysis involves reviewing and analysing a collection of documents. The purpose of a document is to provide supplementary research data, making documents a beneficial method for most research. Documents add credit to the researcher in the field and make it easier for others to build on that work and make discoveries whenever possible.<sup>39</sup> Documents that consisted of semi-structured interviews, personal accounts, and blog posts written about PCLs were selected to understand the challenges that PCLs face, how these challenges have impacted them and what support they need to receive to overcome these challenges. Moreover, the documents analysed include the PE curriculum, education White Paper 6, and lesson plans on PE. Specific data is collected from each of these documents, such as the PE curriculum together with PE lesson plans, which explain the different ways the teaching and learning of PE is structured. Education White Paper 6 provided details of the support service for PCLs.

### Sampling

In this study, relevant articles that were published online within the last nine years (2015-2023) were searched. All articles focused specifically on disabilities in the educational context and the adaptive measures, as well as physical education classes. The targeted articles analysed, consisted of ten articles from reputable journals, and these articles specifically addressed issues and challenges related to barriers to learning and education. The researcher gathered articles from Google, Google Scholar and the library that were written by authors who are experts in the field. Convenience sampling was used for this study. Convenience sampling was appropriate for the selection of documents that were easily accessible online and convenient for me to analyse based on our study.<sup>40</sup>

### Selection Process

The researchers' process of identifying, screening, and determining articles' eligibility and selecting them for inclusion was guided by the PRISMA flow diagram (see Figure 1). The researchers identified about 20 articles across the database and excluded six duplicated articles. From the remaining 14, four were excluded after screening based on their inapplicability to use because two of the four did not explicitly explore PCLs, and the other two were in the context of inclusion in sports. Then the researchers skimmed the title, abstract and body of the identified articles for potential eligibility for the systematic review. A final count of ten studies (n=10) was included for analysis.

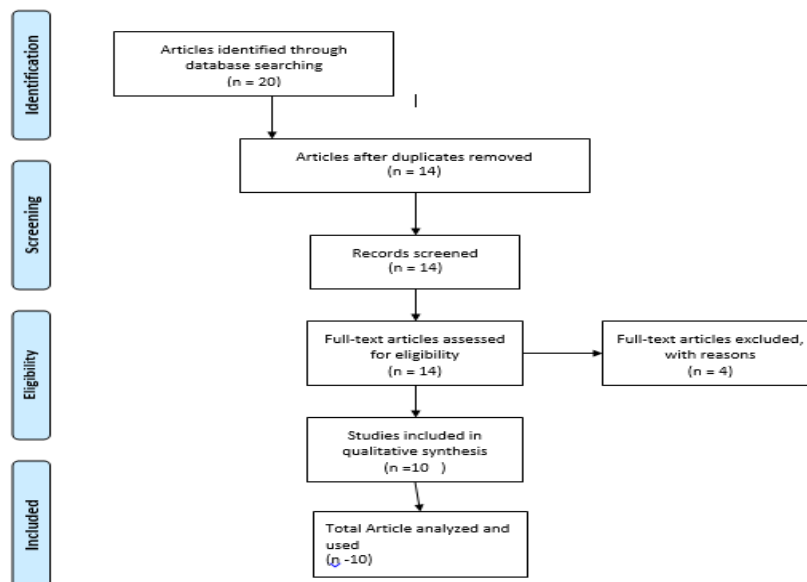


Figure 1: PRISMA flow diagram for identification and selection of studies

<sup>39</sup> Li, Julian PT Higgins, and Jonathan J. Deeks, "Collecting Data." *Cochrane Handbook for Systematic Reviews of Interventions* ."

<sup>40</sup> Samar Rahi, "Research Design and Methods: A Systematic Review of Research Paradigms, Sampling Issues and Instruments Development," *International Journal of Economics & Management Sciences* 06, no. 02 (2017), <https://doi.org/10.4172/2162-6359.1000403>.

### Data Analysis

This study reviewed existing data on the topic at hand, which assisted in identifying the gaps in the literature. The study employed an open coding system to analyse data based on themes on barriers to learning in school premises and strategies to accommodate the PCLs. Inductive thematic analysis was employed to capture important aspects of the data in relation to the research purpose. This method was relevant to this study to find learners’ (those with physical barriers to learning) views, opinions, knowledge, and experience on the challenges they face in PE practical classes. Moreover, a thematic analysis approach was used to create findings from this study. Riger et al. state that thematic analysis is a method for analysing and identifying patterns in the data by means of thematic codes.<sup>41</sup> In this case, themes that are based on the challenges faced by PCLs allow researchers to note key issues in the multifaceted data as well as patterns that arise from it. The thematic approach helps to develop an understanding of the challenges or experiences in depth faced by PCLs in practical physical education classes, which also adds recommendations for improving the practical physical education classes.

### FINDINGS AND DISCUSSIONS

This section presents the findings according to the sub-themes that emerged after coding the data. Four main themes were identified: 1. Inaccessible equipment, 2. Poor social support, 3. Physical education curriculum/programme, and 4. Lack of teacher training. The findings addressed Research Question 1 as possible challenges that PCLs face in practical physical education classes. All the themes contribute to making physical education a challenge to the learners. The inaccessible equipment and poor social support can make it challenging for PCLs to participate in physical education, whilst the PE curriculum and lack of teacher training can result in learners being excluded and unable to understand the activities. Moreover, the findings also addressed Research Question 2 as the strategies that should be employed to support PCLs in practical physical education classes include implementing equipment that is accessible and providing learners with the social support they might need during the practical classes. Also, the PE curriculum needs to be modified to include PCL, and teachers need to be trained to accommodate and work with learners with physical barriers.

**Table 1: Presentation of Themes**

Under the broader theme of the literature gathered the research found helpful factors and sub-themes within the broader themes. These sub-themes were found to be helpful for PCLs to participate in PE practical classes.

Themes	Helpful factor subtheme	Explanation
Inaccessible equipment	Ease of use; Convenience; Safety equipment	Our literature shows that inaccessible equipment as a broader theme is a challenge that PCLs have in PE practical classes, whilst “Ease of use, convenience and safety equipment” are the potential strategies that can be implemented for learners to cope well.
Poor social support	Emotional and practical support; Acceptable	In the literature gathered the broader theme of poor social support is a challenge that PCLs face in PE practical classes, whilst the subtheme of “Emotional, practical support and acceptable” are potential strategies for the challenge for PCLs to cope well in PE practical classes.
PE curriculum/program	Modified: Accommodations; Inclusive	A broader theme of the PE curriculum/programme seems to exclude PCLs from participating in the PE programme. Therefore, a modified, accommodative, and inclusive PE curriculum/programme as a helpful factor subtheme will create an opportunity for learners to participate in PE practical classes.

<sup>41</sup> Stephanie. Riger and Ranniveig Sigurvinsdottir, “Thematic Analysis.’ Handbook of Methodological Approaches to Community-Based Research: Qualitative, Quantitative, and Mixed Methods,” 2016.

Lack of teacher training	Workshops/Training; Instructional strategies	The literature shows a broader theme of lack of teacher training, a challenge for learners to partake in PE practical classes, whilst a helpful factor such as workshops/training and instructional strategies are potential solutions that can help teachers assist learners in coping well in PE practical classes.
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### Theme 1: Inaccessible Equipment

Inaccessible equipment, as one of the identified themes, refers to any equipment obstruction that prevents and creates a challenge for PCLs in using standard equipment that is not adjustable to use.<sup>42</sup> This theme was identified in the thematic analyses of the various studies included in this study. The keywords used in the search were “equipment, accessibility, impairments, and sports”.

In response to the research question “How do practical physical education classes pose a challenge to physically challenged learners?”, the findings of this study indicate that the equipment such as ramps, skipping ropes, rackets, balls, hoops that are used in schools for PE, and all the activities pose a challenge because they are not accessible for physically challenged learners. The literature gathered shows many PCLs cannot use or handle the equipment during PE as some do not have wheelchairs or other assisting devices. A lack of appropriate equipment discourages their participation. Equipment are too heavy to use, some activities are not adjustable, playgrounds are not wheelchair friendly, and other sports field equipment is inaccessible. This theme is significant as it suggests that PCLs cannot fully partake in PE practical classes and are, therefore, unable to reap the benefits of physical education like any other learners without learning barriers.

In response to the research question “What are the strategies that can be implemented in supporting PCLs in practical physical education classes”, the findings of the study suggest that the state is collaborating with the various Departments of Education to provide schools with equipment that are accessible for learners with physical barriers to be able to partake in PE practical classes. This initiative can include providing schools with sports fields that are wheelchair-friendly and sports objects that are not heavy to carry.<sup>43</sup> The government, through the Department of Social Development, can provide learners with wheelchairs to ease the challenges. Also, the school must ensure they provide learners with PE equipment that is accessible to all learners. The World Health Organisation specified that physical education is considered an essential component of a well-rounded education, as it provides benefits that go beyond physical fitness. As such, PCLs should participate in PE practical classes without experiencing any barriers to improve their social and cognitive development. Studies by Opstoel et al. have shown that participating in PE with accessible play equipment not only helps learners stay active but also improves their self-confidence.

### Theme 2: Poor Social Support

Poor social support refers to not showing kindness to make sure that one is cared for, the feeling of belonging and assistance available from teachers or peers during PE practical classes. This means not receiving support accessible through social ties to other individuals, and groups such as teachers, their peers, and the school community.<sup>44</sup> This theme was identified in several studies that investigated learners’ support of sports.

In response to the research question “How do practical physical education classes pose a challenge to PCL?” the findings of this study suggest that learners with physical barriers often experience social isolation and may be susceptible to developing emotional and psychological problems because of rejection from people during PE practical classes.<sup>45</sup> The learners without barriers to learning normally group themselves to participate and exclude those with physical barriers. One study by Tanure et al. stated that they do not receive any support from their peers and educators, which leaves them feeling isolated from the programme. There is a lack of commitment from schools and other concerned bodies to provide adequate support for physical education teachers.<sup>46</sup> A major barrier to participation in PE for learners with physical barriers is reported as poor social support. Physically challenged learners are treated differently by their peers, teachers, and other stakeholders and thus receive different support,

<sup>42</sup> Lisa I Iezzoni et al., “Use of Accessible Weight Scales and Examination Tables/Chairs for Patients with Significant Mobility Limitations by Physicians Nationwide,” *The Joint Commission Journal on Quality and Patient Safety* 47, no. 10 (2021): 615–26.

<sup>43</sup> Devarajan, Raji, Dorairaj Prabhakaran, and Shifalika Goenka. "Built environment for physical activity—an urban barometer, surveillance, and monitoring." *Obesity Reviews* 21, no. 1 (2020): e12938

<sup>44</sup> Katrijn Opstoel et al., “Personal and Social Development in Physical Education and Sports: A Review Study,” *European Physical Education Review* 26, no. 4 (2020): 797–813.

<sup>45</sup> Shweta Mishra, “Social Networks, Social Capital, Social Support and Academic Success in Higher Education: A Systematic Review with a Special Focus on ‘Underrepresented’ Students,” *Educational Research Review* 29 (2020): 100307.

<sup>46</sup> Sophie L Van Veldhuisen et al., “Bariatric Surgery and Cardiovascular Disease: A Systematic Review and Meta-Analysis,” *European Heart Journal* 43, no. 20 (2022): 1955–69.

which they perceive as not acceptable.<sup>47</sup> Pedersen et al. noted that many PCLs often experience frustration and negative emotions as a result of their educational experiences, which is often due to the negative attitudes of their peers.<sup>48</sup> Furthermore, the study indicates that these learners often do not receive the emotional support they need from their prospective schools. The first draft of the United Nations report on persons with barriers was released in South Africa in 2012 for public comment and input to ensure the report accurately reflected the needs of people with the needs.<sup>49</sup>

In response to the research question that asked for details of the “strategies that can be implemented in supporting PCLs in practical physical education classes,” the findings of the study suggested that strategies that could be implemented to develop social support in PE practical classes are inclusive play, teacher and peer support. Teachers must ensure that learners do not group themselves during PE practical classes and that there is peer support. They must also ensure that they provide inclusive support to all the learners. The school management team also needs to implement school policy about inclusive education on school premises so that all learners receive support and are included in all the learning areas without feeling isolated. The government of South Africa is thus beginning to understand the far-reaching support needed for all persons, including PCLs. It is hoped that updated legislation will be tabled based on the feedback during the public commentary process.

### **Theme 3: PE Curriculum/Programme**

The PE curriculum is a structured programme that aims to develop learners’ physical fitness, motor skills, and ability to participate in physical activities provided. These objectives mean that the physical education curriculum is designed specifically for able learners. The findings show that PCLs were not considered in the design of this curriculum.<sup>50</sup> This finding seems true since there were no provisions or alternatives in the curriculum for learners who, for example, use wheelchairs.

Responding to the research question “How do practical physical education classes pose a challenge to PCLs?”, the findings indicate that PCLs were unable to perform the identified games due to their individual barriers. For example, learners using a wheelchair could not skip the rope or might not be able to partake in sports that require running. It is said that the current PE programme has not been adapted to the needs of learners with physical barriers. The current programme was made to cater for learners without any learning barriers; hence it poses challenges to those with physical barriers.

Another research question was, “What strategies can be implemented in supporting PCLs in practical physical education classes?” The findings suggest that one of the strategies that could be used is for the Minister of Basic Education and curriculum developers to implement a PE curriculum that is inclusive and accommodative for PCL. Also, teachers can try to modify the activities more holistically and ensure that there are inclusive instructions. In South Africa, for example, the Department of Basic Education has published a policy document called White Paper 6, which outlines the framework for providing special needs education.

It emphasises the significance of creating an inclusive education and training system that meets the needs of all learners, including those with physical barriers to learning. One of the Goals outlined in White Paper 6 is for curriculum developers to create a system that can identify and address the barriers to learning that exist for learners with special needs.<sup>51</sup> The South African PE programme or curriculum needs to be modified to accommodate PCLs better. The curriculum developers need to reconsider and include activities that learners with physical barriers can partake in.

### **Theme 4: Lack of Teacher Training**

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<sup>47</sup> Maria Luiza Tanure Alves et al., “‘I Didn’t Do Anything, I Just Watched’: Perspectives of Brazilian Students with Physical Disabilities toward Physical Education,” *International Journal of Inclusive Education* 24, no. 10 (2020): 1129–42.

<sup>48</sup> Eric Emerson et al., “Loneliness, Social Support, Social Isolation and Wellbeing among Working Age Adults with and without Disability: Cross-Sectional Study,” *Disability and Health Journal* 14, no. 1 (2021): 100965.

<sup>49</sup> Marlene Rosager Lund Pedersen, Anne Faber Hansen, and Karsten Elmose-Østerlund, “Motives and Barriers Related to Physical Activity and Sport across Social Backgrounds: Implications for Health Promotion,” *International Journal of Environmental Research and Public Health* 18, no. 11 (2021): 5810.

<sup>50</sup> Corrina Mills-Fairweather et al., “‘The Department of Women, Children & People with Disabilities (DWCPD) Commissioned Health and Development Africa (HDA) to Conduct This Study in 2013. HDA Further Sub-Contracted the Services of the Medical Research Council, Due to Its Extensive Work within the Area of Sexual and Intimate Partner Violence in South Africa.’ HDA Further Sub-Contracted the Services of the Medical Research Council, Due to Its Extensive Work within the Area of Sexual and Intimate Partner Violence in South Africa.,” 2013.

<sup>51</sup> Tatang Muhtar and Ruswan Dallyono, “Character Education from the Perspectives of Elementary School Physical Education Teachers,” *Jurnal Cakrawala Pendidikan* 39, no. 2 (2020): 395–408.

Whilst teacher training usually means the preparation for professional practice through formal courses that equip teachers with skills to better connect with PCL, the lack thereof is the reverse.<sup>52</sup> This implies teachers lack the skills and knowledge to work with PCLs. This theme was identified in all the studies that explored teachers' training in inclusive education that were included.

In response to the research question that states, “How do practical physical education classes pose a challenge to PCLs?” The findings of this study showed teachers often lack access to professional development opportunities that could help them better understand the needs of their physically challenged learners. There is a vast amount of literature which emphasises the value of teacher training development for teachers who lack the skills to work with the PCLs.<sup>53</sup> The data revealed that the vast majority of PE teachers are not comfortable enough to work with PCLs in practical physical education classes. They do not use modified methods of teaching in physical education, instead, they use the same methods used with normal learners. Many studies have been carried out on teachers’ attitudes towards inclusive education to teach PCLs. Some teachers discriminate against PCLs as they see them as too demanding. Physically challenged learners have feelings that teachers are incompetent to assist them, especially on the sports field, to participate in PE. A lack of specially trained teachers can thus be seen as a barrier to participating in PE practical classes for physically challenged learners.

In response to the research question on “strategies that can be implemented in supporting PCLs in practical physical education classes”, the findings of the study suggest that teachers need to be taught about PCLs.<sup>54</sup>

The importance of teacher training, such as that of professional development and teacher education programmes, should focus on helping teachers make informed decisions based on the assessment data they collect from their learners. Additionally, these programmes should prioritise the development of empathy and understanding for PCLs, which can assist teachers in providing more effective support. A common theme from participants’ responses about what could be done to improve their situation was that they wanted teachers and learners to be educated about their barriers and how to support them better.

**Implications**

The purpose of the study was to explore the challenges that PCLs face in practical physical education classes. The primary implication of this research is that it provides a broad overview of secondary data on challenges that PCLs encounter during practical physical education classes. The data, therefore, helps identify strategies that can be implemented to support PCLs in practical physical education classes. Physical education has several benefits for learners’ holistic growth and development, so all learners need physical education classes in their lives. As such, the new study findings can also create awareness for the MEC of education, curriculum developers and SMTSSs to reconsider the PE curriculum or programme (by modifying PE activities) that will be accessible to all learners despite their barriers. The study also provides the readers with information on what barriers PCLs face in PE practical classes. It also suggests potential strategies or solutions to the barriers. The current study, as far as the researchers know, is the first systematic review that provided a framework (shown in Table 2 below) for more integrated Physical Education for physically challenged learners (PCLs).

**Table 2: Proposed Framework towards more integrated physical education for physically challenged learners (PCLs) by Ogbonnaya and Thekeledi.**

	PE Setting	School Setting	Intervention for Physically Challenged Learners
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<sup>52</sup> South Africa. Department of Education. *Education White Paper 6: Special needs education: Building an inclusive education and training system*. Pretoria: Department of Education, 2001.

<sup>53</sup> Crispel, Orly, and Ronen Kasperski. “The impact of teacher training in special education on the implementation of inclusion in mainstream classrooms.” *International Journal of Inclusive Education* 25, no. 9 (2020): 1079-1090

<sup>54</sup> UNICEF Staff. *The state of the world’s children 2011-executive summary: Adolescence an age of opportunity*. UNICEF, 2011.

<b>Accessible equipment</b>	Ensure the availability of physical education equipment. Provide appropriate physical space facilities.	Speak with the appropriate staff members if you observe that a disabled student is not receiving the required support in class.	Teachers design physical activity tasks to accommodate both physically and non-physically challenged learners.  Ensuring the participation of PCLs in activities and resolving any imbalances that may occur if they are left out.
<b>Social supports</b>	Inquire as to whether the learners are being challenged with any discriminatory language, then urge them to speak up.	Talk about the discriminatory terminology that is used in the classroom.	Provide Emotional and Practical support & Acceptable environment.
<b>PE curriculum/ program</b>	Ensure the curriculum provides guidelines and that the terminology is not descriptive enough to use it effectively. Ensure content is not difficult for a teacher without experience to understand the terminology and effectively apply it.	Ensure the PE curriculum accommodates both physically and non-physically challenged learners.	Provide a modified, accommodative, and inclusive PE curriculum/program. To understand the terminology and effectively apply the curriculum in the planning of physical education lessons.
<b>Teacher training</b>	Ensure qualified teachers are available for both physically and non-physically challenged learners.	Observe any limitations exhibited by teachers.	Provide workshops/Training and instructional strategies.

## RECOMMENDATIONS

The study attempted to identify the major challenges that PCLs face in practical physical education classes. Though there has been some research conducted on the challenges faced by learners with special needs, it is still an area that requires further exploration and study, particularly in the physical education class. It is recommended that the challenge of inaccessible equipment be addressed by making it easily accessible so that future generations of PCLs do not suffer the physical challenges generated at present. Schools, together with the MECs, should offer social support to PCLs to feel safe in PE practical classes and be given a platform to express their challenges in full. It is also recommended that policymakers and curriculum developers should integrate a programme that includes activities that are modified, such as modified aquatics, dance, as well as group games and sports, to integrate PCLs into typical PE practical classes. Finally, it is recommended that policies, procedures, and practices that prevent PCLs from participating be addressed and that workshops and training be offered to physical education educators to be inclusive and use modified or appropriate methods of teaching.

### *Limitations of the study*

The study's limitations mean that the data may not provide enough depth or insight into the PCLs' feelings, emotions, and experiences than what was revealed in the sources reviewed. This study only made use of mostly qualitative sources, leaving out those that used other methodologies. Their inclusion might have produced different results. Finally, the fact that this study is a systematic review approach could be a limiting factor due to unpredictable parameters placed on the study.

## CONCLUSION

The purpose of this systematic review was to explore challenges faced by physically challenged learners in practical physical education classes. Thematic content analysis was used in this study as the main method of data analysis. The present study's findings seem to mirror those of previous research, which suggests that PCLs often face barriers to participating in practical physical education classes as a result of inaccessible equipment. Learners also had to deal with the poor social support they received from their peers and educators during the practical physical education classes. Moreover, studies indicated that the PE curriculum was made to cater for learners without any learning barriers; hence it poses challenges to those with physical barriers and teachers are not trained enough to work with those learners during PE practical classes.

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