



Implementation of Physical Education In Inclusion Schools: A Systematic Literature Review

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History Article

Received July 2025
Approved July 2025
Published vol 12 no 1 2025

Keywords

Implement;Physical;
Inclusive;School

Abstract

Background: This study discusses how physical education is taught in inclusive schools in the context of physical education teachers, inclusive/disabled students, and its application in inclusive schools. Research Objective: The objective of this study is to examine the implementation of physical education in inclusive schools based on findings from various literature. Methodology: The PRISMA standards were used for a systematic review and meta-analysis covering the period from 2020 to 2025. The keywords “Implement”, “Physical”, “Inclusive”, and “School” were used in the search procedure. The search engine utilized a total of 348 articles were obtained from Scopus databases. After applying the Inclusion criteria, only 8 articles remained. Findings/Results: Various studies highlight the role of physical education teachers and understanding the factors influencing students with disabilities as key factors for success and effectiveness in promoting inclusive physical education implementation. Conclusion: The role of physical education teachers in inclusive schools is a frequently discussed topic in this review. Several essential limitations to this review should be noted. For future research, it would be exciting to add new keywords or topics related to coaches and athletes.

How to Cite

Wijayanto, I., & Wijayanti, D. G. S. (2025). Implementation of Physical Education In Inclusion Schools: A Systematic Literature Review. *Journal of Physical Education, Health and Sport*, 12 (1), 68-75.

INTRODUCTION

The 2030 Sustainable Development Agenda of the United Nations (UN) has as one of its objectives to guarantee “quality and equitable education” for all, leaving no one behind (Gutierrez, 2020). In other words, there is a need for education professionals to develop greater awareness of the importance of inclusive philosophy for the development of societies. In fact, several authors highlight that increasing knowledge about the process of school inclusion in a higher education context represents one of the predictors of effectiveness in inclusive education (Alhumaid, 2021).

In line with social justice goals, inclusion means that children and young people are treated equitably and with dignity, regardless of their background, identity or circumstances. Inclusion also promotes belonging and learning together in an environment where support and appreciation of individual differences is the norm (Unesco, 2017). However, provision in schools is often criticised for being varied and inconsistent, often perpetuating a rhetoric of exclusion (Warnes et al., 2022). These concerns are raised across schooling and subject areas; and Physical Education (PE) is no exception (Makopoulou et al., 2022).

The “Guideline” includes guidance and opinions on the work of children with disability, indicating that China’s inclusive education is aimed at children with disability, that is, children with disability and typically developing children receive education under the same roof. Currently, in the United States and western countries, teaching students with disability has been studied a lot and there is a whole industry known as Adapted Physical Education (Block et al., 2021). However, quality physical education advocates meeting the needs of all children, allowing children with disability to enter general physical education classes, participate in physical education activities with typically developing children, enjoy equal rights and opportunities in physical education, and pay maximum attention to individual differences.

While school communities are required to provide physical education opportunities for all students—including for those with disabilities—the same is not generally true with respect to school sport (i.e., participation in interscholastic or intramural sport programs). Hence, opportunities for inclusive school sport participation are consequently limited. These limited opportunities are impacted by additional barriers somewhat unique to school contexts.

For example, with respect to interscholastic sport programs, teacher-coaches may be inadequately trained to address the needs of students with disabilities, students with disabilities may only be afforded “exhibition” competition opportunities at sport events, and school sport teams are oftentimes prohibitively traditional and/or highly selective to the best performing student-athletes (Kozub & Samalot-Rivera, 2020; Lakowski, 2011).

Although there have been a number of studies on this topic, there has been no comprehensive synthesis that systematically integrates findings from various literature. Therefore, this study aims to conduct a systematic literature review (SLR) of research on the implementation of Physical Education (PE) learning in inclusive schools over a five-year period from 2020 to 2025 to explore Teacher, students, School and implementation practices of Physical Education (PE) in the context of inclusive school. This review is expected to contribute theoretically and practically to the development of more adaptive, responsive, and inclusive learning. This study is expected to present key findings, challenges faced, and strategies implemented by teachers in developing inclusive and equitable Physical Education (PE) learning.

METHOD

There are various types of literature reviews: narrative literature reviews, systematic literature reviews, and meta-analyses. Since the subject of this study is based on educational science, so a systematic literature review was chosen as the method used (Otero-Saborido et al., 2021).

PRISMA is not only used in medical research but has also been widely adapted in the fields of education, psychology, and the social sciences (Page et al., 2021). The recommended journal for Preferred Reporting Item for Systematic Reviews and Meta-Analyses (PRISMA) is a standard for published literature reviews (Mohamed Shaffril et al., 2019).

To formulate the research focus and determine the inclusion criteria for articles. The literature identification and selection process was conducted based on the PRISMA 2020 guidelines (Page et al., 2021). This includes the stages of identification, screening, eligibility, and inclusion of relevant articles. This bibliographic data center contains information on high-quality multidisciplinary research published in scientific journals

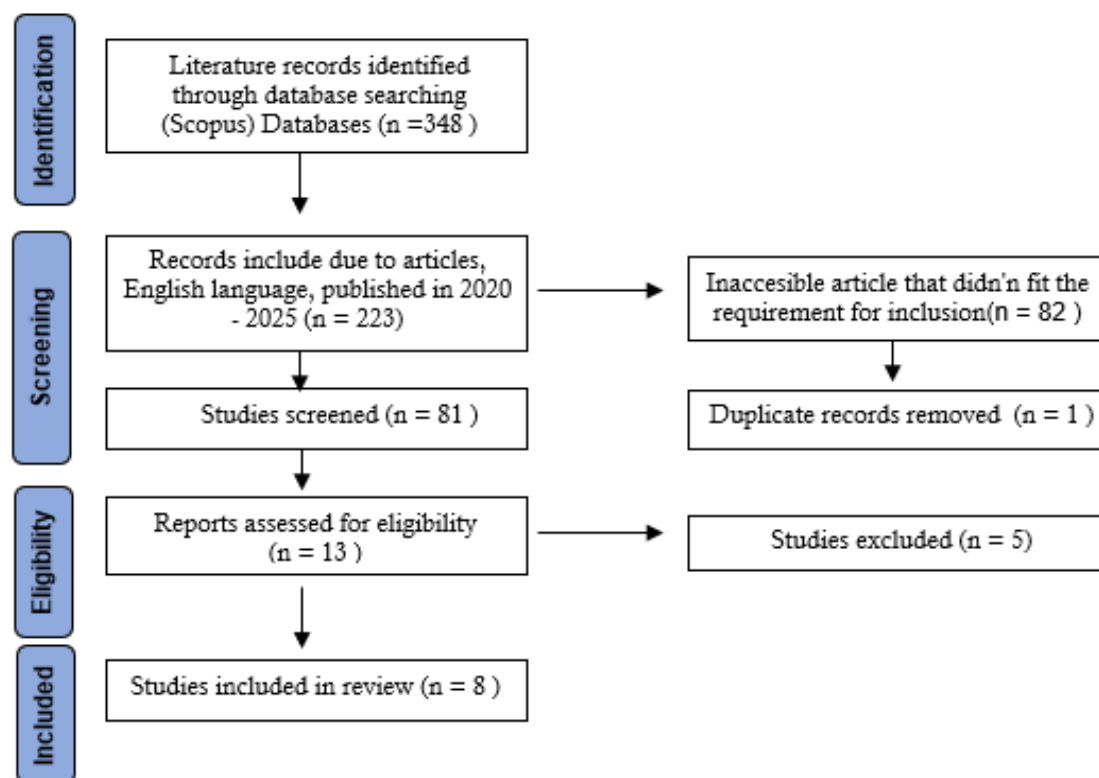


Figure 1. The flow diagram of the study (Shaffril et al., 2019).

with significant global impact and enables Integrating records to facilitate this study research (Santamaria-Granados et al., 2021).

The terms used in the Scopus search were implement* AND physical* AND inclusive* AND school*. Initially, 348 articles were obtained from the Scopus database. All articles were collected from the database and analyzed using the Covidence web page tool to remove duplicate articles and select data. After applying the inclusion criteria, only 13 articles remained. Most articles were discarded because the filter was applied to the last five years (2020-2025), only articles in English and can access

From the identification stage to inclusion in the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA), 8 publication samples were obtained from a total of 348, **Figure 1.**

RESULTS AND DISCUSSION

The six categories listed in **Table 1** are described and discussed in eight articles collected between 2020 and 2025.

The search yielded 348 articles. Of these, eight articles that met the criteria were included above. Three hundred forty articles were excluded, one article was a duplicate, and Some articles are outside the scope of this review and co-

ver different topics. Based on the explanation in **Table 1**, the discussion covers these six categories (except for authors and years).

Several articles were taken from reputable Scopus journals between Quartile Q1–Q3. There are five journals with Q1, such as Physical Culture and Sport. Studies and Research, Frontiers in Psychiatry, Frontiers in Sports and Active Living, Education Sciences, Physical Education and Sport Pedagogy. There are two articles in Q2 journals such as Frontiers in Psychology, and there is Q3, namely the European Journal of Adapted Physical Activity.

Country: This category was included in the analysis to examine and review how inclusive schools are implemented in physical education in various countries around the world. Based on this review, there are three continents: Asia has one study (Xue et al., 2023), Europe had four studies (Celestino et al., 2024; Gentile et al., 2023; Karamani et. al., 2024; Zimlich & Reuter, 2024) and the third article from the Americas (Ahlers et al., 2023; Robinson et al., 2023; Saldana & & Villarreal, 2025).

In Asia, China is the only country representing the continent one article. Europe is the continent with the most articles, consisting of Germany one article, Italy one article, Portugal one article, and the United Kingdom one article.

Table 1. Summary of articles about physical education (PE) in Inclusion School published between 2020 and 2025.

Author & Year	Country	Method and Sample	Purpose	Result	Source and Database
Perspectives of Students with intellectual disabilities on Inclusive Physical Education in Germany					
(Zimlich & Reuter, 2024)	Germany	The study used semi-structured interviews with 17 students with intellectual disabilities. A thematic analysis was applied to analyze the interview data. Consensual coding or "investigator triangulation" was employed for credibility. A deductive approach was used to analyze main topics. An inductive approach was applied to identify sub-categories.	The study aims to explore SIDs' experiences in inclusive PE settings. It addresses the lack of voices from students with intellectual disabilities. The research seeks to understand perspectives for better inclusion in PE	The study reveals inklusiv' perspectives on inclusive PE are often overlooked. Results indicate physical inclusion does not guarantee social inclusion. Co-teaching is recommended for effective inclusive PE implementation	European Journal of Adapted Physical Activity/ Scopus (Q3)
Inclusion of Students With Disabilities in Physical Education: The Crossroads of Systemic Coherence					
(Saldana & Villareal, 2025)	Chile	The study employed a multiple case study methodology. Data collection included focus groups, interviews, and observations. Analysis involved constructing thematic categories through inductive processes. Expert judgment validated the categories of analysis.	The study aims to identify factors affecting inclusion in physical education classes. It examines pedagogical practices that facilitate or hinder student inclusion.	The study identifies factors affecting inclusion in physical education classes. It highlights the need for coherent and systemic inclusive strategies. Teacher commitment and collaboration are crucial for effective inclusion. The research reveals challenges in implementing inclusive practices in schools.	Physical Culture and Sport. Studies and Research/ Scopus (Q1)
"On an island by myself": implications for the inclusion of autistic students in self-contained classrooms in public elementary schools					
(Ahlers et al., 2023)	United States	Semi-structured interviews were conducted with principals and special education teachers. Thematic analysis was used to analyze the qualitative data. Fidelity observations were conducted in special education classrooms.	The study aims to support inclusion for autistic students in schools. It explores special education teachers' unique expertise in autism. The research characterizes principals' and teachers' perceptions of autism culture	Results integrate teacher perspectives on autism-specific culture and inclusion. Thematic analysis revealed barriers and facilitators to inclusion. Educators' attitudes impact inclusive opportunities for autistic students. Recommendations for supporting true inclusion beyond physical presence are discussed.	Frontiers in Psychiatry/ Scopus (Q1)
Game Changers: A participatory action research project for/with students with disabilities in school sport settings					
(Robinson et al., 2023)	Canada	The study utilized participatory action research methods. Data were collected through surveys and focus group interviews. Observations of school and sport settings were conducted. A mixed-methods design was employed for data collection.	The purpose was to enhance inclusive sport opportunities for students with disabilities. It aimed to empower students to lead in sport programming development. The project sought to identify and address sport participation barriers.	Game Changers improved students' perceived competence and autonomy. It invited student voice and identified sport participation barriers. Genuine sport opportunities were created within school settings. Some findings indicated unachieved intrinsic motivation and belonging. Sustainability of sport programs without interventions like Game Changers was questioned.	Frontiers in Sports and Active Living/ Scopus (Q1)

Inclusive physical activity games at school: The role of teachers' attitude toward inclusion					
(Gentile et al., 2023)	Italy	A sample of 1,583 school teachers completed a questionnaire on perceptions and strategies. Data were analyzed using SPSS (version 24) for descriptive statistics and ANOVA. Path analysis model assessed influences on inclusive strategies and attitudes.	The study aims to investigate teachers' attitudes toward inclusion in physical activity games. It explores the influence of self-efficacy and familiarity on inclusive strategies. The research focuses on teachers across all school grades.	Teachers reported lower scores in attitude toward inclusion in primary schools. Attitude toward inclusion indirectly influenced the use of inclusive strategies. Familiarity and self-efficacy directly affected the use of inclusive physical activity games	Frontiers in Psychology/ Scopus (Q2)
Physical Education Teachers' Representations of Their Training to Promote the Inclusion of Students with Disabilities					
(Celestino et al., 2024)	Portugal	The study used quantitative-statistical analysis for data treatment. Qualitative-content analysis was applied to open question responses. QSR NVivo11 software coded interview transcripts for analysis.	The study aimed to identify PE teachers' training representations for inclusion. It focused on developing inclusive processes for students with Specific Health Needs. The research highlights the need for improved teacher training in inclusive education.	The study identified two dimensions: initial and Continuous training for inclusion. Teachers lacked essential skills for teaching PE to students with SHN. Continuous training improved teachers' skills for inclusive PE. Training does not fully meet teachers' needs for intervention with SHN. Recommendations include enhancing curricula and practical training components	Education Sciences/ Scopus (Q1)
The influence of school inclusive education climate on physical education teachers' inclusive education competency: The mediating role of teachers' agency					
(Xue et al., 2023)	China	Data were collected from 286 teachers via online convenience sampling. The School Inclusive Education Climate Scale was utilized for data collection. The Physical Education Teachers' Agency Scale was also employed. The PE Teachers' Inclusive Education Competency Scale was used in the study.	The study examines the influence of inclusive education competency on teachers. It explores relationships between school climate, teachers' agency, and competency. The research aims to understand teachers' agency in educational reform.	Inclusive education climate positively affects teachers' inclusive education competency. Teachers' agency mediates the relationship between climate and competency. Study involved 286 physical education teachers from primary and junior high schools.	Frontiers in Psychology/ Scopus (Q2)
The complex journey towards the enactment of inclusion in physical education: a scoping review of the literature on teachers' perceptions and practices					
(Karamani et. al., 2024)	United Kingdom	Data extraction was conducted using a developed framework for consistency. Independent data extraction was performed by three authors on selected papers. Title and abstract screening were conducted using inclusion/exclusion criteria. Quality appraisal utilized ICROMS and MMAT tools for study assessment. Results were analyzed across three themes related to inclusion. The study addresses inclusive education as a global priority	The paper examines the provision of inclusive education in schools globally. It critiques the varied and inconsistent implementation of inclusive practices. The study aims to explore teachers' perceptions of inclusion.	The paper identifies themes on inclusion's meaning and importance. It discusses barriers and challenges encountered in inclusive education. The analysis includes reflections on study characteristics and contexts. Findings are supported by examples from diverse national contexts. The provision of inclusive education is highlighted as a global priority	Physical Education and Sport Pedagogy/ Scopus (Q1)

Meanwhile, the Americas have two articles from North America: Canada one article and the United States one article, and one from South America: Chile one article.

Method: The methods used in the articles were based on a review of the categories of methods, types of research, and samples used. Four articles employ qualitative research methods, with two articles exclusively using a qualitative approach (Ahlers et al., 2023; Zimlich & Reuter, 2024). The remaining two articles (Robinson et al., 2023) utilize participatory action research. Participatory action research combines research, education, and actions in the process of collaborative learning and collective problem-solving with those affected by the problem being studied (Chevalier & Buckles, 2019). From four qualitative articles (Saldana & Villareal, 2025) using the Case Study approach. A case study is a research method that investigates phenomena in real-life contexts where the boundaries between the phenomenon and the context are unclear, and uses various data sources (Yin, 2018). A case study is a research design, while qualitative is a general approach.

Two articles use a quantitative method (Celestino et al., 2024; Gentile et al., 2023). The next article (Xue et al., 2023) This study uses a cross-sectional research design, which is an observational research method that collects data from a specific population or sample at a specific point in time (Creswell & David Creswell, 2018). Future research should consider using longitudinal research methods. Longitudinal designs involve collecting data at multiple time points to observe changes and developments in the target population (Creswell & David Creswell, 2018). Meanwhile, the last article (Karamani et al., 2024) uses the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines for scoping reviews (Tricco et al., 2018) as a reference in this review, including the structure of the methods section.

Based on this review, we analyzed the objectives and content produced, identifying three research groups:

Physical Education Inclusion Teachers: Of these three research groups, the role of physical education teachers is a key factor in the successful implementation of inclusive physical education (Karamani et al., 2024; Robinson et al., 2023; Zimlich & Reuter, 2024). Differences in physical education teachers' perceptions and attitudes toward inclusion vary based on the level of school (kindergarten, elementary school, junior high school, and high school) (Gentile et al., 2023).

Inclusion students: Understanding the factors that influence students with disabilities is an important factor in promoting effective inclusion in physical education (Saldana & Villareal, 2025; Zimlich & Reuter, 2024).

Inclusion School: The importance of schools adopting policies and practices that support the inclusion of students with autism, emphasizing the importance of a systematic approach to inclusion (Ahlers et al., 2023). The importance of principal support in recognizing and implementing inclusive education, which is essential for creating an inclusive school environment (Xue et al., 2023).

The purpose of this article is to describe research on the implementation of physical education in inclusive schools. such as Author and Year, Country, Method and Sample, Purpose, Results and Sources and Databases. However, Author and Year are excluded from this review.

In this article review, the implementation of inclusive schools has spread to various countries, (i) China (Asia), (ii) Germany, Italy, Portugal, and the United Kingdom (Europe), (iii) the United States, Canada, and Chile (America). Based on these countries, Europe is the continent with the highest number of articles. The methods and types of research used include quantitative research, qualitative research, mixed research (quantitative and qualitative), and heuristic approaches applied to various content. Meanwhile, this review identifies three research groups: (i) Physical Education (PE) Teachers for inclusive education, (ii) Inclusive students, (iii) Inclusive schools.

The study reveals inklusis' perspectives on inclusive PE are often overlooked. Results indicate physical inclusion does not guarantee social inclusion. Co-teaching is recommended for effective inclusive PE implementation (Zimlich & Reuter, 2024). It highlights the need for coherent and systemic inclusive strategies. Teacher commitment and collaboration are crucial for effective inclusion. The research reveals challenges in implementing inclusive practices in schools (Saldana & Villareal, 2025). The paper examines the provision of inclusive education in schools globally. It critiques the varied and inconsistent implementation of inclusive practices. The study aims to explore teachers' perceptions of inclusion (Karamani et al., 2024).

CONCLUSION

The final results indicate that the number

of studies on the implementation of physical education in inclusive schools is very limited and geographically confined to the continents of Asia, Europe, and the Americas. The role of physical education teachers in inclusive schools is a topic frequently discussed in this review.

The research discusses the importance of a comprehensive approach to inclusive education, particularly in Physical Education (PE) for students with Specific Health Needs (SHNs) and Special Educational Needs (SENs), emphasizing the need for effective planning, implementation, and evaluation. It highlights that inclusive practices—such as differentiated instruction, positive peer interactions, and co-teaching—are more successful when supported by strong school leadership, a positive school climate, and ongoing professional development. Teacher self-efficacy, practical training, and familiarity with inclusive strategies are essential for effective implementation, while systemic challenges like limited infrastructure and inconsistent pedagogical approaches can hinder progress. Programs like "Game Changers" demonstrate how structured planning, training workshops, and evaluation phases can support inclusive physical activity. The study underscores the need for participatory methods and feedback mechanisms that empower students with SENs and calls for educational institutions to adopt coherent, context-sensitive strategies to support long-term inclusive education efforts.

Several limitations inherent in this review should be noted. First, the database used in the article search was limited to only one database, namely Scopus. Second, although a thorough literature search was conducted, some published studies may need to be considered due to the possibility of using different keywords from those currently used. For future research, it would be interesting to explore the topic of physical education in inclusive schools, and this review could be expanded to address the topic of inclusion in sports, particularly among coaches and athletes. Future researchers may also consider updating the timeframe and incorporating additional databases such as PubMed, Web of Science, and other relevant databases into the article search process.

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