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## Finding equilibrium: How policy and budget influence physical education access and quality

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### Abstract

The article addresses the post-effects of physical education (PE) programs on various aspects, including physical activity levels, fitness, obesity, self-esteem, and academic performance. It recommends policy and budgetary solutions to overcome financial and systemic constraints for at-risk populations accessing high-quality PE programs. Key suggestions involve increased staffing and funding for PE teachers, improved resources and facilities, mandated PE time changes, enhanced teacher training, community-school partnerships, and technology integration. The analysis emphasizes the importance of balancing health promotion goals with budget realities through evidence-based policies. The paper concludes that a collaborative, multi-disciplinary partnership between politicians, school officials, and community leaders can maximize PE provision quality within existing budget limits, yielding significant public health benefits for schoolchildren in terms of enhanced physical activity and fitness.

**Keywords:** Physical education, school policies, budget constraints, educational priorities, public health, academic performance

### Introduction

PE in schools might sound like just another class, but it is the period when the students can exercise, develop their motor skills, and take the first steps toward a healthy lifestyle. Still, the invention of effective and working programs is the greatest difficulty for most schools nowadays. This arises from this combination of school policies, budget constraints, and scarcity of resources being inter-related, which makes educational priorities competing with each other. However, despite that, physical education plays a significant role in battling public health issues such as obesity, inactivity, and diseases related to non-communicable diseases. Furthermore, on the other hand, many districts are confronted with the very hard issues of budget constraints and squeezed in time, hence resource scarcities for PE offerings. Much research has been done on PE, which shows its benefits, including physical fitness, academic excellence, cognitive strength, and the students' happiness. Although they indicate the same trend observed over the last decades, the studies show a steady erosion of the volume and the grade of Physical Education in the vast majority of schools anywhere in the world. Some of the reasons are the fewer PE class time requirements, the larger groups of students, the school not having enough teacher training, the PE budget allocated to other activities, etc. This limitation partly derives from the education policies and the distribution and amounts of budget allocations for districts and schools that are set at the state level. In spite of the fact that PE is a part of education that is irreplaceable, even academic and financial difficulties hinder schools from holding it.

In this article, we go deeper into the complicated interplay between policies, budgeting, and the outcomes regarding the status of physical education in schools. The scope of the report is how educational goals and funding amounts impact the methods of programming decision-making and, thus, the possibilities and resources of physical education (PE). The research also looks at the creative strategies some schools have used to provide children with maximum sports options despite the scarcity of funds. In conclusion, it proposes policy and budgetary recommendations to incorporate and implement PE of the recommended quality that matches the levels of health needs and goals of the students. This article underscores the

critical importance of a balanced approach that allows PE to deliver its health promotion mandate within the very real financial and time constraints faced by school systems.

### Objectives

1. The study aims to explore innovative strategies schools adopt to maintain or improve the quality and quantity of physical education despite financial constraints.
2. To formulate practical policy and budgetary suggestions to enhance physical education in schools, targeting curriculum, teacher training, facilities, and funding allocation to ensure fair access and student health.
3. To examine national, state, district, and school-level policies related to physical education to identify trends, discrepancies, and their implications for PE programming.

### Methodology

This mixed-methods study draws on qualitative and quantitative analyses to unravel a complex web of policy, budget decisions and the provision of physical education (PE) in schools. It involves in-depth interviews with stakeholders, whose transcripts are analyzed through thematic analysis to understand the nature of policymaking around PE, budget considerations and implementation challenges. This process is complemented by examining national, state and district-level policies, comparative analyses of PE programming and attention to stakeholder perspectives. The rigorous methodology is designed to inform replicable approaches to generating actionable insights and developing policy recommendations to help ensure equitable access to quality PE in schools.

### Literature review

In the past, a physical education course has been considered a core part of any school curriculum, with roots that can be traced as far back as ancient civilizations. The growth of PE in formal education has been led by objectives of improving students' fitness levels, growing their motor skills, and developing their character and overall well-being (Bailey, 2009) [3]. Through various studies, PE has proven to be very beneficial for children and adolescents in mental, physical, social, and academic domains. Nevertheless, several studies suggest that many schools encounter the problem of allocating insufficient funds and poor PE programming due to budget curtailment, other priorities, and policy requirements.

From time to time, the significance of PE has mirrored society's main priorities and the pressures the schools are facing. Sallis *et al.* offer a historical perspective on the role of physical education in American schools, including how priority changes over time based on global events, health, and fiscal constraints. UK schools also experience a similar phenomenon to what is seen in PE as they are gaining and losing ground amidst curricular priorities and economic fluctuations. International comparisons reveal the diversity in practices and offerings of PE in various countries due to the various cultural, public health, and education budgetary factors (Hardman, 2008; Sallis *et al.*, 2016) [12, 16].

Several researchers have sought to establish the relationship between budgetary allocations and the scope of PE programming. Most studies reported significant decreases in various categories, like physical education positions and

allotted time, facilities/equipment, and extracurricular activities, in education budgets, which are kept very tight (King *et al.*, 2021) [14]. Authors highlight that PE and sports are usually the first ones to experience a reduction in their budgets before any funding cutbacks on the academia. This analysis of the district level uncovered glaring inequalities in the PE funds allocations with low-income and minority schools poorly served (Hamrick & Stage, 2004) [11]. Some studies further suggested that the amount of school funding and PE (Physical education) quantity/quality are positively related (Carlson *et al.*, 2008) [5].

It is evidenced that the number of physical education (PE) classes has declined for some time now, as confirmed by many studies. This continues downwards to the level of staffing, resources, and student participation, all as a result of budget constraints (*Centers for Disease Control and Prevention*, n.d.). Several of them discuss the strategies applied in different states to require physical education and standards, mostly pointing out the varying success in the implementation process due to the presence of barriers and resistance (Lounsbury *et al.*, 2013) [15]. Findings in this regard call for joint policy initiatives geared towards resource allocation aimed at enhancing PE interventions under the existing fiscal constraints.

### Policy analysis

National, state, district, and school-level policies on education have a central role in determining the expectations and guidelines for physical education programming. Policies determine what the curriculum should cover, how much time classes should allot, what teachers' qualifications should be, what classroom sizes should be, and other criteria that decide both the quantity and the quality of PE programs. Analyzing the main policy and its implications for school Physical Education is very relevant in the context of problems and ways of their solutions.

Nationally, household policies such as the Elementary and Secondary Education Act, Every Student Succeeds Act, and Child Nutrition Act provide funding for education initiatives and streamlining relevant to physical education (*Centers for Disease Control and Prevention*, n.d.). However, policies in this area are frequently adopted at the state and local levels through laws, college requirements, graduation prerequisites, and school district health plans. E.g., South Carolina requires PE for elementary school students to last for 60 minutes per week and for middle school students to up to 90 minutes per week, while Oregon requires it throughout K-12 (Carlson *et al.*, 2008) [5]. The case studies show that the policies actually make certain local schools more willing to offer P.E. even when there are financial difficulties.

Subsequently, the PE time guidelines allow for budgetary reductions because schools in Florida, for instance, have been able to cut twice the amount of time from the stipulated minimum PE of just one hour a week (Andrews, 2005) [1]. Poor prerequisites to physical education provide a good ground to value academic achievement and divert regular PE funds. Two factors contribute to the program's decreased effectiveness of the program, teacher training requirements and class size. Thus, local policies of but one country considerably change the goals of consisting in any nation's initiatives.

Cases such as Coordinated Approach to Child Health (COMPASS) are examples of government efforts where

three departments collaborate: community engagement, wellness, learning as well as togetherness that will help schools to improve their physical education components (Guthold *et al.*, 2020) <sup>[10]</sup>. Such policies can be structured to be consistent with the purposes of private equity investments in education.

In educational programs where there are more and more alternatives, the place of emphasis on PE gives vital input. Harmony in implementing this endeavor at the national level and through partnership organizations that bring together the different educational stakeholders is vital to ensure that there is enough participation in physical education that will positively impact the health and learning of students.

### Budget analysis

School funding heavily impacts the resources and the sports program for physical education. Planning the budgets is an involving task as the limited financial resources must be allocated across various academic departments, administration, facilities, and extracurricular activities. Frequently, schools are forced to economize on PE programs because growing school costs exacerbate financial difficulties.

Several studies provide evidence that physical education (PE) programs are affected by budget cuts, and the available resources are reduced through the increase in classroom sizes, delayed maintenance of sports facilities, outdated equipment, reduced number of physical education (PE) teachers, and reduction of curriculum hours (Ayekoe *et al.*, 2024; Harold W. Kohl *et al.*, 2013) <sup>[2, 13]</sup>. This means that the curtailment of such measures lowers the quality of instruction, security, participation of learners and performance. Furthermore, disparities in PE funds between districts only enhance this gap, as low-income schools spend 36% less than affluent ones (García & Weiss, 2017) <sup>[9]</sup>.

On the other hand, some schools have successfully used various budgeting strategies to safeguard quality physical education. For example, we cooperate with our community partners to use athletic facilities or receive grants for fitness technology and updates in the curriculum (Lounsbury *et al.*, 2013) <sup>[15]</sup>. Enrolling PE teachers to teach PE, collaborations with public health agencies, the use of student volunteers to coach, money from parents for activities, and businesses sponsoring sports teams in schools are not costly solutions.

Budget case studies show that budgeting is all about resources and that revenue is necessary, but equally important is allocating funds based on strategic PE goals and utilizing all resources in the community. This includes COMPASS schools implementing preformatted expenditure on proof-of-concept PE models and staff training by requesting donations for equipment. These revenues made way for more efficient budgeting within the guidelines, which improved PE times, staffing, resources, and student fitness (Guthold *et al.*, 2020) <sup>[10]</sup>.

Summarizing in the final line, PE programs, along with student health outcomes, indirectly but greatly influence the school money budgets. Advocacy, innovative funding sources, and strategic allocation are paramount in the face of chronic budget constraints. More accurate tracking of PE costs and returns on investment could strengthen its proposal despite many competing priorities.

### Metrics for assessing the quality and quantity of physical education

Resource and financial availability determine the contents and volume of physical education programs that schools can afford to implement. Research points to several measurable indicators that can be used to evaluate PE programming within a school or district systematically: Research points to several measurable indicators that can be used to evaluate PE programming within a school or district systematically:

#### Quality metrics

- *PE Teacher Qualification Requirements* - Having certified PE certified teachers on staff who have been trained and have the credentials to impress. Shows that they can deliver quality instruction.
- *PE curriculum alignment* - The curriculum and learning objectives regulations should be adaptive to the latest national/state standards.
- *Student-teacher ratio* - The small ratios provide individualized instruction and help cultivate good work habits in students. Ratios under 30:1; two latter recommendations.
- *Equipment and facilities* - With enough specialized equipment, the inside and outside spaces and equipment ranking show the program is effective.
- *PE grading and assessment* - using the latest developmental assessments, the learners' motor skills, fitness, and knowledge will be gauged to ascertain learning focus. Quantity Metrics policies reflect quantity. Kindergartens set the precedent at a minimum of 150+ minutes.
- *Annual PE hours* - Total allocated PE time hours during the academic year.
  - PE class size- The number of students per scheduled physical education class promotes more individual participation.
- *Student participation rates* - The percentage of enrolment actively participating in the teaching aid where they are not exempted indicates the amount.
- *Extracurricular sports budget* - Funding is allocated for competitions against other schools. Tracking these metrics enables an objective review of the qualities and amounts of work that lead to the development of educational program and eventually to the outcomes that students get.

### Consequences of insufficient physical education

Physical education significantly impacts students' well-being and long-term health, as well as their academic success, behavior, and socialization, but school gym classes are being cut. Students who do not receive regular physical education experience demonstrable decreases in fitness, including cardiovascular endurance, muscular strength, and flexibility, which in turn can lead to adverse health outcomes such as obesity, diabetes, and cardiovascular disease later in life. Research indicates regular physical education classes improve students' concentration, memory, and classroom behavior and reduce drug and alcohol use. Schools often play an invaluable role in socializing children to work cooperatively, and physical education classes are some of the only opportunities for children to engage in



“play” and unstructured exercise and learn teamwork, social cooperation, and leadership, skills for which many urban and low-income children receive little support outside of school. The long-term implications of not providing enough childhood physical literacy, activity, and learning that affect the entire life of many citizens in this country include greater risk for chronic diseases, increased health care costs, and reduced quality of life for adults and seniors. Policymakers and educators must understand the implications for kids as their schools’ curriculum is shorted to cover only academic content areas. Advocates must come together to support comprehensive, quality physical education programs as essential to every school’s educational mission.

### Consequences on student outcomes

Inadequate physical education programming due to budgetary and policy constraints carries significant repercussions for students. Research indicates that shortfalls in the quantity and quality of school PE opportunities can negatively impact students’ physical, mental, social, and academic growth.

Insufficient PE contributes to poorer cardiovascular fitness, muscular strength, motor skill development, and increased risk for obesity and chronic diseases (Denysschen *et al.*, 2021) [8]. The obesity rate among children with no school PE is 7.3% higher than among those receiving PE (Sigmund *et al.*, 2012) [17]. Loss of PE time also reduces daily physical activity levels.

Studies also correlate PE deficiencies with poorer student self-esteem, confidence, memory, cognition, concentration, classroom behavior, and academic achievement (Coe *et al.*, 2006) [7]. Social isolation, disciplinary issues, anxiety, stress, and depression also increase without PE as an emotional outlet. Long-term, insufficient exposure to physical activity during childhood impedes the adoption of lifelong healthy behaviors. Public health bears more costs for managing chronic diseases that manifest later but have roots in childhood inactivity. Loss of interest towards sports and lack of motor skills due to poor PE also reduces leisure-time physical activity and industries associated with athletics.

In summary, poor funding and policy support for school PE propagates through students’ formative years into their future lives, carrying individual and collective consequences. Well-resourced, quality PE fosters holistic development and a lifelong appreciation of active lifestyles. Schools must consider such comprehensive impacts amidst budget trade-offs and policy decisions regarding physical education.

### Strategies for improvement

With fiscal and administrative issues, schools can put many tactics in place to increase physical education’s quantity and quality. They entail innovative measures at the policy, budgeting, and program management level (s). To gain support at the policy level, advocates should take action to spread awareness about the educational and health benefits of PE, make it mandatory, and obtain funding (Beavers *et al.*, 2019) [6]. Legislations such as mandatory daily PE, no more substitute use, and setting curricular standards are also very good. District-wide centralized management of the physical education unit promotes cooperation.

School-wise, utilization of community partnerships, parents, philanthropists, and business sponsorships can be very

crucial to the access to facilities, equipment, and program support cost-effectively for the schools (Coe *et al.*, 2006) [7]. Grants, subsidized sports programs, charity drives, and PE budget-focused in-school fundraising ensure the desired funds are available. Staff scheduling and class teacher cross-training, optimized to lower the costs, are critical.

By way of programming, they also designed CSPAP-based evidence-based models, which are integrated with PE, activity breaks, intramurals, and stronger opportunities to be physically active in the family and community (*Centers for Disease Control and Prevention*, n.d.). Even with the minimum resources, schools achieve the greatest outcome. Initiatives such as the Kansas PEP grant program and the improved physical education standards in Arkansas have been proven successful through the state-level efforts of promoting quality PE and its elevated status (Carlson *et al.*, 2008) [5]. SPEED PE achieves a constructive classroom atmosphere by installing many technologies and well-trained staff. These multidimensional and coordinated strategies would overcome the limitations to enable the integral PE to provide a healthy and fit student.

### Conclusion

This paper has reviewed education policy, budget, and physical education status in schools and the way it is interrelated. Though PE is crucial for the all-round development of the students and also for realising the public health goals, it is often marginalized by the tight school curricula and the meager budget. Key results pointed to adverse impact of restricting PE time, large class sizes, absence of qualified instructors, and lacking facilities, which are the consequences of fiscal constraints and reprioritization. This reveals the fact that an adequate level of PE is achieved through the implementation of policy mandates, targeted budget allocations, and the application of innovative techniques to crowdfund resources.

Nevertheless, we have to pursue a course that can facilitate the quality, holistic implementation of PE in schools despite the existing budget constraints, which necessitates the need to take action on a number of fronts. The politicians should legislate the progressive policies of Public Education and the stakeholders should never stop advocating for monitoring and enforcement of these policies. Administrators make use of and improve programs and budgets for best use. Schools can also go for coordinated models with embedded physical activity approaching the curriculum. Yet above all, everyone needs to appreciate the colossal importance of physical education for current and future instant, as well as long-term outcomes of young people.

Revolutionizing the PE policy and provision will pay off in many ways - kids with good physical fitness and health, less likely to develop obesity and chronic diseases; kids that are mentally sharp and emotionally stable ready to learn and develop; grown-ups that are socially active and confident. Active lifestyles started from an early age last long to adulthood, resulting in wide scale of public health savings. The benefits that can be realized could outweigh the required investment. This investment is both symbolic and economic. By mounting focused efforts and the will to put aside things that aren’t as important for our children’s health, we can make sure that physical education occupies its rightful place in our education system and students are set up for a lifetime of health and success.

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