



Original Contribution

PHYSICAL EDUCATION TRAINING IN PRIMARY SCHOOLS – A PATHWAY TO HOLISTIC DEVELOPMENT

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ABSTRACT

PURPOSE: In the context of modern education, the role of physical education in primary schools has evolved beyond mere physical fitness into a multifaceted tool for shaping the overall development of children. Physical education training at the primary school level provides a vital foundation not only for physical health, but also for cognitive, emotional, and social growth. This abstract delves into the transformative power of Physical Education in the early educational stages, examining its profound impact on children's motor skills, social interactions, mental resilience, and long-term well-being.

METHODS: At its core, physical education training in primary schools emphasizes more than the ability to perform physical tasks; it fosters an understanding of movement as an intrinsic part of daily life. From simple games and team sports to individual activities like swimming or dance, physical education exposes young learners to diverse ways of engaging with their bodies and the world around them. Early exposure to physical activity creates neural connections that enhance cognitive function, improve concentration, and facilitate academic success. This foundational phase is critical because it lays the groundwork for a lifetime of healthy habits, both physically and mentally.

RESULTS: The first significant impact of physical education is on *motor skill development*. Children in primary school are at a crucial stage where their fine and gross motor skills are rapidly evolving. Through activities such as running, jumping, balancing, and throwing, students develop their coordination and strength, which are essential for later stages of physical development.

CONCLUSIONS: However, these physical activities do not exist in isolation; they are directly linked to mental growth. For instance, a game of soccer may seem simple on the surface, but it requires children to think strategically, anticipate actions, and make quick decisions—all of which enhance their cognitive abilities. This blending of physical exertion with intellectual engagement illustrates the holistic nature of Physical Education training in primary schools.

Keywords: activities, physical education training, development, pedagogical sciences

INTRODUCTION

Equally important are the *emotional and social benefits* that physical education offers. In a primary school setting, where children are just beginning to navigate social structures, PE provides a natural platform for building communication skills, teamwork, and leadership. Activities that involve group participation, whether they're cooperative games or competitive sports, encourage children to engage in collective problem-solving. Through both success and failure, they

learn essential life skills such as conflict resolution, perseverance, and empathy. „The lessons of fairness, respect, and collaboration gained in physical education often transcend the schoolyard and influence students' interactions outside of class. These social competencies are crucial for the emotional maturation of young learners“ (1). Furthermore, physical education serves as a powerful tool in *mental health promotion*. The connection between physical activity and mental well-being is well-documented, and physical education programs in primary schools are ideally positioned to cultivate positive habits early. Regular physical activity is linked to the release of endorphins, which help alleviate stress and anxiety. For

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children who may struggle with the pressures of schoolwork or social dynamics, physical education can provide an invaluable release—a safe, enjoyable way to manage stress. „Additionally, PE fosters *resilience*. Whether it's learning to cope with a loss in a game or pushing through physical challenges, children develop a mental toughness that extends far beyond the gymnasium“ (2). One of the more overlooked benefits of physical education training in primary schools is its role in *instilling lifelong habits*. Early physical activity experiences shape how children view fitness and health throughout their lives. By making exercise fun and integral to the school day, PE introduces a mindset that values health, stamina, and well-being. This foundational approach can reduce the risk of future health issues, such as obesity and cardiovascular diseases, and instills a sense of responsibility for one's own body. The patterns set in these early years often last into adulthood, contributing to a healthier, more active population. The integration of incorporating technology and innovative tools in physical education is another emerging trend that can enhance both engagement and learning outcomes. While it's essential to maintain a focus on physical activity, tools like heart rate monitors, fitness apps, and interactive whiteboards can offer students real-time feedback on their performance and progress. Virtual games and simulations, when used appropriately, can also engage children in novel ways, especially for those who may not feel immediately comfortable with traditional sports. Moreover, technology allows for personalized feedback, empowering students to monitor their own development. For example, students might track their progress in a fitness challenge or use an app to create their own workout routines, fostering a sense of responsibility for their own health and fitness journey.

MATERIALS & METHODS

The methodology for physical education in primary schools requires an innovative, adaptive, and student-centered approach that reflects the diverse developmental needs of children. It cannot simply follow a one-size-fits-all framework; rather, it demands a flexible, dynamic structure designed to engage, challenge, and inspire young learners. The aim is not only to develop physical skills, but also to

foster an enduring appreciation for movement and exercise as integral parts of everyday life. This methodology combines traditional techniques with modern pedagogical strategies, integrating play, exploration, structured activities, and informal learning.

Play-Based Learning and Exploration

At the foundation of primary school physical education lies play. For young children, play is not just fun - it's a critical avenue for learning. Research has shown that play-based activities stimulate cognitive, physical, and social development, providing the perfect context for teaching fundamental motor skills. Whether it's chasing a ball, climbing a jungle gym, or participating in imaginative group games, play allows children to explore their bodies' capabilities in a low-pressure, enjoyable environment. „Through play, students develop coordination, balance, and spatial awareness, all while engaging in creative problem-solving and building social relationships“ (3). The methodology of play-based learning in PE promotes *freedom of movement* and *exploratory activities* that allow children to experiment with their physical limits in a safe, non-judgmental space. It encourages curiosity, creativity, and risk-taking, laying the foundation for more structured skills development in later years. Teachers can facilitate this exploration by designing activities that tap into children's natural impulses to move, jump, run, and dance, while subtly integrating the principles of physical fitness, such as agility, strength, and endurance. „The external image is the technique of the game and the presentation of the game, the special forms of expression of the attitude towards the material, the transfer of the emotional attitude towards reality, the mastery of the skill of self-presentation“ (4). The appearance of the teacher, of course, can create a working or non-working state in the classroom, help or hinder mutual understanding, facilitating or hindering pedagogical communication. Professional activity is revealed through the procedural component of the image on **(Figure 1)**, which is concretized by such forms of communication as professionalism, plasticity, expressiveness, etc. An emotional teacher who knows the methods of verbal and non-verbal expression of feelings and purposefully uses them is able to revive the lesson, make it expressive.

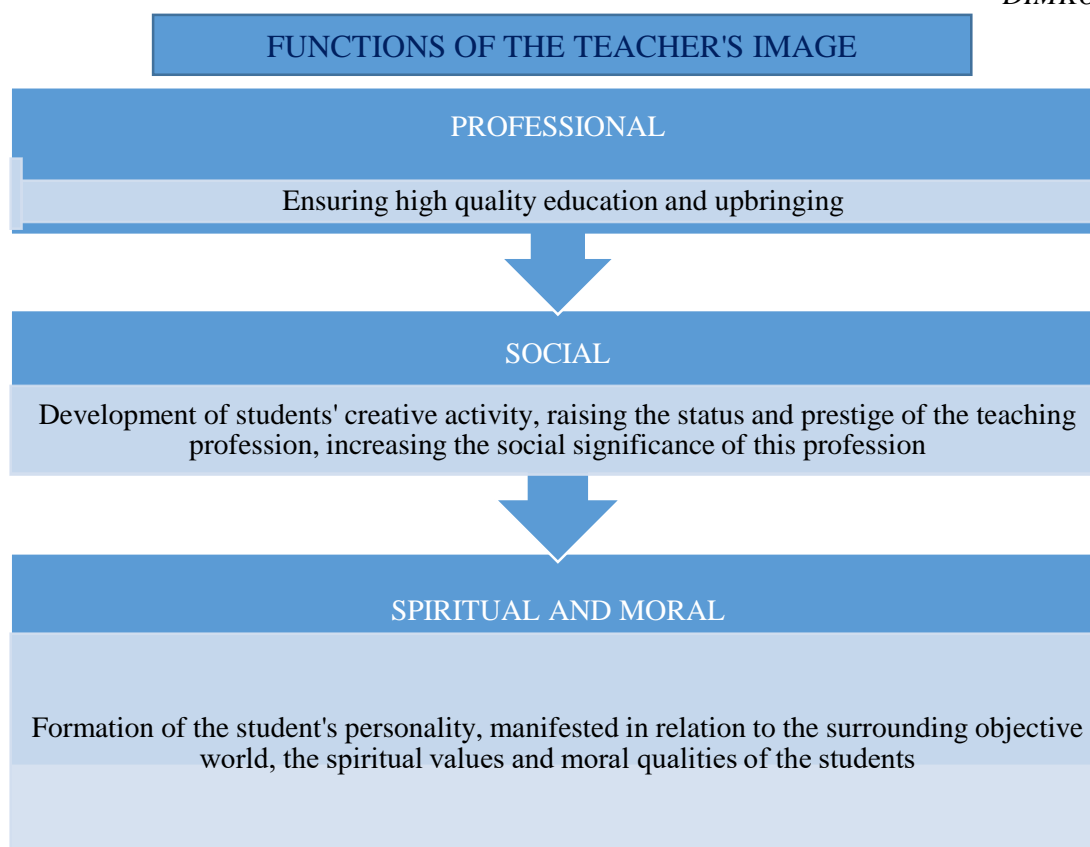


Figure 1. Functions of the teacher's image

The internal component is the inner world of a person, the idea of his spiritual and intellectual development, interests, values, and his personality as a whole (5).

Inclusive and Differentiated Instruction

An effective methodology in primary PE also relies heavily on *inclusive teaching practices*. Children come into the classroom with diverse abilities, interests, and learning styles, and physical education must adapt to these differences. Differentiated instruction, a cornerstone of inclusive teaching, allows educators to modify tasks and expectations to suit individual needs without compromising the learning experience. This approach ensures that every child, regardless of skill level or physical ability, can participate meaningfully in PE activities. For example, in team sports, while some children may excel at running or kicking a ball, others might struggle with coordination or confidence. A teacher using differentiated instruction might offer alternative activities or provide additional support, such as breaking down skills into smaller, more manageable steps. This methodology promotes *self-esteem* and *motivation*, as children feel empowered to

progress at their own pace, without the fear of judgment or failure. "The basis for building effective motivation for cognitive activity are the individual needs of the student. Their knowledge by the teacher is a necessary condition for research and pedagogical activity" (6). The competencies of teacher leaders in the modern era are reflected in assessing student progress, preparing and planning lessons, caring for the classroom climate, and managing student behaviour. The basis of competence - interaction with students is the preparation for effective communication with students both in the teaching process and in situations related to their personal development and their interpersonal relationships in the student community (7). The specific competencies of the constructed profile of the pedagogue can be seen in **(Figure 2)**.

The listed competencies indicate that the leader's personal integrity is paramount and that they themselves must be principal investigators. The qualities of a leader that every teacher should possess according to the authors (8). are the following: integrity, principles, predictability, inspiration, a look into the future,

sociability and efficiency, possessing the necessary knowledge, skills and competencies.

Integrated Learning: Connecting Physical Activity with Cognitive Skills

In modern pedagogical frameworks, there is a growing recognition of the *connection between physical activity and cognitive development*. Physical education can no longer be seen as a separate or isolated component of the school curriculum. Instead, it should be integrated into broader learning experiences that involve *multisensory engagement*. „Activities that combine physical movement with *math*, *literacy*, or *science* concepts, for instance, allow

children to engage both their bodies and their minds.“(9). For example, a teacher might design a scavenger hunt where students run to different stations to solve math problems or collect objects that represent certain scientific concepts. This fusion of movement with intellectual challenge not only enhances physical fitness but also reinforces academic learning. Such integration ensures that students understand the value of movement beyond the gymnasium, recognizing it as a tool for both personal health and intellectual engagement.



Figure 2. Constructed profile of the pedagogue

Student-Centered and Collaborative Learning

A key component of an effective PE methodology is *student-centered learning*, which focuses on the individual needs, interests, and goals of the students. In this approach, students are encouraged to take an active role in their learning, setting personal goals and reflecting on their progress. This fosters *autonomy* and *self-regulation*, critical skills that will serve them well both in and out of the classroom. Group-based activities and collaborative learning also play a vital role in primary physical education programs. Teamwork is more than just playing on a soccer team it's about fostering cooperation, leadership, communication, and respect. For

effective leadership in education, it is necessary to understand the current situation, but also to understand the goals to be achieved and the steps that lead to their achievement. Effective leadership of the modern teacher requires reflection on experience and ability, but also the desire and motivation of teachers to take on this role. The leadership of the modern teacher reflects the way he works towards both students and colleagues. Accordingly, each of the mentioned activities relies on certain knowledge, skills and competences that the teacher must possess. The effect of the leadership practice of the modern teacher on student achievement can be seen in (Figure 3) (10).

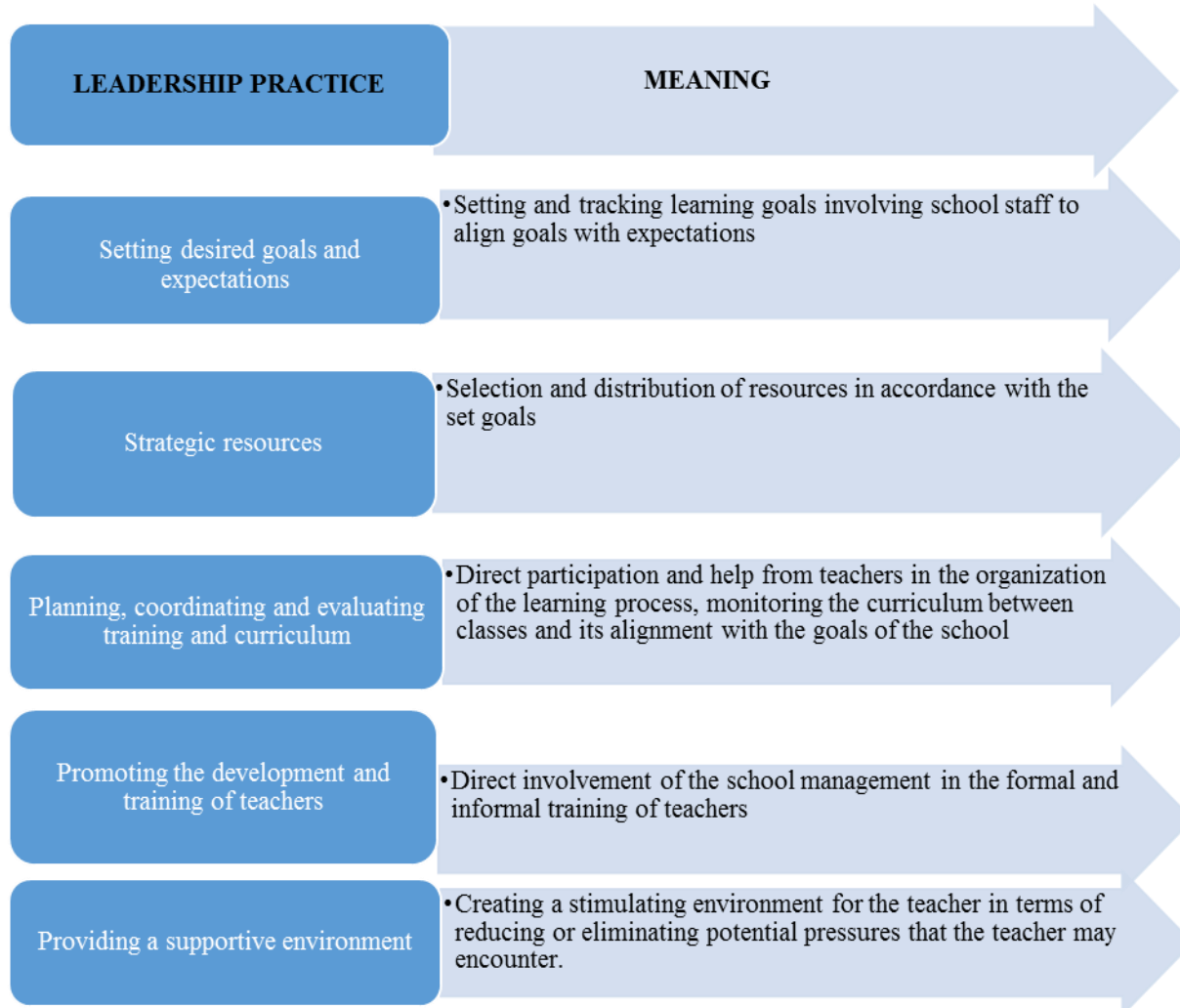


Figure 3. Effect of the leadership practice (10)

Collaborative games, relay races, or cooperative challenges encourage students to work together towards a common goal, promoting empathy and group cohesion. The role of the teacher in these activities shifts from the traditional "instructor" to that of a *facilitator*, guiding students through discussions, problem-solving, and conflict resolution within group dynamics (11). Leadership is one of the factors within the scope of the education system that influences the quality of education. The leadership competencies of teachers are expressed in the creation of a stimulating learning environment, the development of critical thinking, problem-solving skills, as well as others indicated in (Figure 4). Without leadership competencies, the teacher would not be able to face the complex requirements of the learning group, nor to promote the development of individual students (12). This would mean that traditional views on the teaching profession are not aligned with the needs and specifics of the modern era, which is why significant changes are needed in

the initial education of teachers in the direction of preparing them for effective leadership.

Assessment for Learning

Lastly, an essential part of the methodology is the use of *formative assessment*. Rather than solely focusing on summative evaluations like tests or end-of-term scores, physical education teachers should employ ongoing, observational assessments to monitor progress. This allows for real-time adjustments in teaching strategies and ensures that every child is given the support they need to succeed. Assessment in physical education should be holistic, considering not only physical performance but also aspects like teamwork, attitude, effort, and personal growth. A well-rounded approach to assessment encourages a growth mindset, where effort and persistence are valued over innate talent or final outcomes.

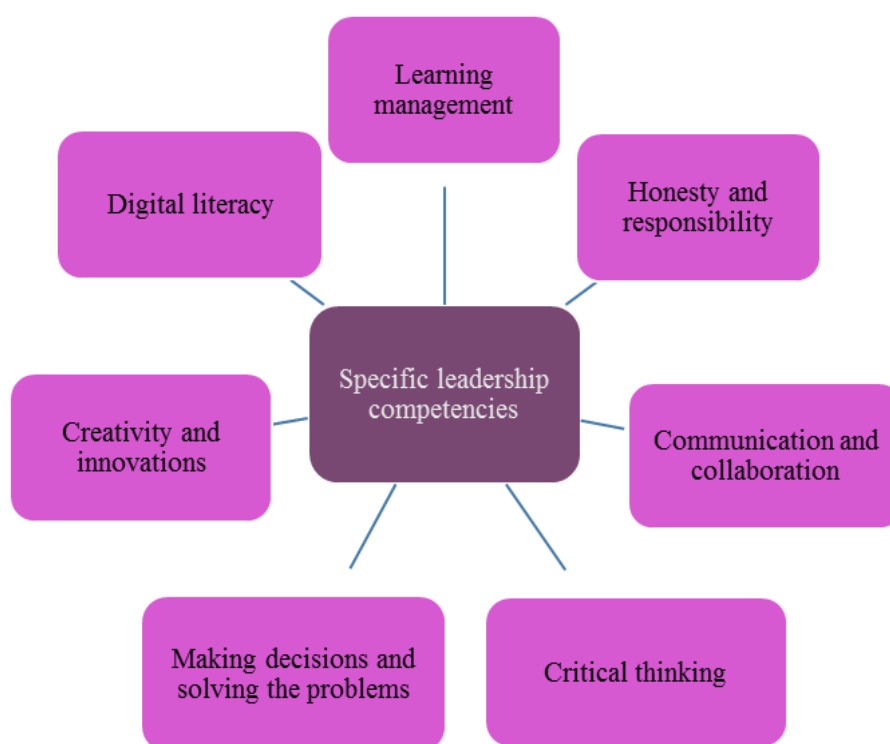


Figure 4. Specific leadership competencies

RESULTS

The impact of physical education in primary schools is far-reaching, extending beyond just the improvement of physical fitness. When integrated effectively into the school curriculum, PE can yield transformative results that shape children's development in ways that may not always be immediately visible but have lasting implications. The results of quality physical education programs are multifaceted, influencing a wide array of domains - *physical health, mental well-being, social skills, and academic achievement*—all of which contribute to a child's overall success and growth.

Physical Health Improvements

At the most immediate level, the most apparent result of a robust PE program is the improvement in physical health. From the perspective of physical development, children in schools with comprehensive PE curricula tend to exhibit better *motor skills, coordination, and overall physical fitness*. Studies consistently show that regular participation in physical activities helps children maintain a healthy weight, reduces the risk of obesity, and supports cardiovascular health. Children engaged in regular movement activities are not

only more likely to develop muscle strength and endurance, but they also tend to have improved bone health and better posture as they grow. A study in the *Journal of School Health* noted that children who engage in physical education classes regularly have *stronger immune systems* and are less likely to develop chronic health issues like type 2 diabetes, hypertension, or metabolic syndrome. Furthermore, PE helps combat the adverse effects of *sedentary behaviour*—an issue exacerbated by increased screen time and more sedentary lifestyles. The result is a more active, healthier generation of children who, through early engagement in physical activity, are setting the stage for long-term well-being.

Cognitive and Academic Benefits

While the physical benefits of PE are widely acknowledged, the *cognitive and academic* advantages are equally compelling, though sometimes underappreciated. Research has shown that regular physical activity boosts brain function, enhancing students' ability to concentrate, retain information, and process complex tasks. One of the most notable results is the improvement in *executive functions*, including memory, attention, and decision-making skills. Children who participate in daily physical

activity tend to perform better on tasks requiring mental focus, problem-solving, and creativity (13).

Moreover, studies suggest that *physical exercise enhances brain plasticity*, the brain's ability to form new neural connections. This has a direct correlation with improved *academic performance*. In fact, schools that incorporate physical activity alongside academic learning often see improvements in reading comprehension, math scores, and overall test performance. The link between physical exercise and cognitive enhancement may be due to the increased blood flow and oxygenation to the brain that occurs during physical exertion. Thus, a child who participates in physical education is not only strengthening their body but also improving their academic capabilities.

Emotional Resilience and Mental Health

The mental and emotional benefits of physical education in primary school are profound. Perhaps one of the most significant outcomes of physical education is the promotion of *mental health*. Physical activities have long been known to reduce symptoms of anxiety, depression, and stress. Children who engage regularly in physical education are often more equipped to handle the emotional pressures of school life. Through activities that involve teamwork, competition, and personal challenges, children learn to manage stress, cope with failure, and bounce back from setbacks—skills that contribute to *emotional resilience*. The release of endorphins, the brain's natural "feel-good" chemicals, during physical activity is a well-documented phenomenon. As a result, children who are regularly active experience an improved mood, better emotional regulation, and greater self-esteem. These emotional benefits are especially important in primary school, as children are navigating the complexities of peer relationships, academic pressure, and personal identity. Physical education provides an outlet for emotional expression and helps children develop a positive body

image, contributing to better overall psychological health. Moreover, when children participate in team-based sports or collaborative games, they learn to *manage interpersonal relationships*, handle conflicts, and develop empathy—skills that build their *social-emotional intelligence*. Whether they win or lose, the emphasis on teamwork and fair play encourages respect for others, helping children form healthier peer relationships and fostering a sense of belonging within their school community.

DISCUSSION

Beyond the immediate benefits of physical activity on health and cognition, one of the most important results of physical education in primary schools is the development of *social and behavioural skills*. In a typical physical education setting, children are often required to work in teams, whether in cooperative games, sports, or group challenges. Through these interactions, students develop key interpersonal skills, including communication, collaboration, and conflict resolution. Engaging in sports teaches children how to navigate success and failure, and they learn to understand the importance of perseverance and self-discipline. These experiences help nurture *leadership and teamwork skills*, as children must learn to work with peers, encourage others, and lead by example. Whether it's the role of a team captain or a supportive teammate, the lessons learned through physical education extend far beyond the game (14). Physical education also plays a pivotal role in promoting good behaviour. Structured physical activities often come with clearly defined rules, and children learn the importance of following instructions, respecting boundaries, and demonstrating good sportsmanship. These social norms instil a sense of accountability and responsibility, which translates into improved behaviour both in and outside the classroom. Finally, the most lasting result of physical education in primary school is the instillation of *lifelong physical activity habits*. The positive experiences children

have with physical activity at an early age often carry over into adulthood.

Studies have consistently shown that children who enjoy physical education and sports are more likely to continue engaging in exercise as adults, leading to better long-term health outcomes. By introducing children to a variety of physical activities from traditional team sports to individual pursuits like yoga, swimming, or cycling physical education provides students with the tools to make active living a lifelong pursuit. These habits, formed in primary school, can reduce the risk of numerous chronic health conditions, increase overall life satisfaction, and contribute to sustained mental and physical vitality into adulthood.

CONCLUSION

In conclusion, the significance of physical education training in primary schools cannot be overstated. It is a holistic, multi-dimensional approach to education that nurtures the body, mind, and social spirit of children. From motor skill enhancement to emotional resilience, from cognitive development to fostering healthy life habits, physical education is a cornerstone of primary education. It goes beyond fitness; it is a means of equipping children with the essential tools to navigate the world, both in and outside of school. As society continues to place increasing value on mental and physical health, it is imperative that primary school PE programs evolve to meet the needs of future generations, ensuring they are not just physically prepared but emotionally and socially well-equipped to face life's challenges. The methodology for physical education in primary schools is not simply about designing lessons that improve physical fitness; it is about crafting an educational experience that nurtures a child's body, mind, and social-emotional skills. Through a blend of play-based learning, differentiated instruction, integrated academic and physical activities, and technology, primary physical education can become a transformative experience that empowers children to thrive in all areas of life. The challenge lies in adapting the curriculum to the unique needs of every student, ensuring that physical education becomes a gateway to a lifetime of health, confidence, and active engagement with the world around them.

REFERENCES

1. Baltacı, A. & Balcı, A. Complexity Leadership: A Theoretical Perspective. *International Journal of Educational Leadership and Management*, 5(1), 30–59, 2017.
2. Teacher networks. Today's and tomorrow's challenges and opportunities for the teaching profession. *European Schoolnet (EUN Partnership AISBL)*, Brussels, 2022.
3. Kin, T. M., & Kareem, O. A. School leaders' Competencies that make a difference in the Era of Education 4.0: A Conceptual Framework. *International Journal of Academic Research in Business and Social Sciences*, 9(5), 214–225, 2019.
4. Jovanović, D. The analysis of teacher leadership styles – perceptions of secondary school students. *Facta universitatis, Series: Teaching, Learning and Teacher Education*, 6(1), 11–32, 2022.
5. Dimkova, R. The image of the teacher in pedagogic science, a key moment for increasing the competencies of the trainees. Institute of knowledge management, *International Journal, Scientific Papers* Vol. 62.2, p. 237–243, ISSN 1857-923X (e-version), ISSN 2545 – 4439 (printed version), Skopje, 2024.
6. Marcheua, P., Pedagogical design of training for the development of cognitive activity. Veliko Tarnovo: Faber, 96–97, 2020.
7. Chavdarova, S. Handbook for the application of the competence approach in the training of future teachers. 63–67. <http://www.mon-nmciot.bg/virtualLibrary.html>. 2022.
8. Goolamally, N., & Ahmad, J. Attributes of School Leaders Towards Achieving Sustainable Leadership: A Factor Analysis. *Journal of Education and Learning*, 3(1), 122–133, 2014.
9. Arsenijevic, A. From decentralization of education to teacher leaders. In D. Ristić (Ed.), *Proceedings from the XIII international scientific professional conference Age of Knowledge*, Sremski Karlovci: Faculty of Management, pp. 32–39, 2015 //Arsenijević, A. Od decentralizacije obrazovanja do nastavnika lidera. U D. Ristić (Ur.), *Zbornik radova sa XIII međunarodne naučno stručne konferencije Doba znanja*, Sremski Karlovci: Fakultet za menadžment, pp. 32–39, 2015.

10. Dimkova, R. Contemporary education and concepts of leadership of the modern teacher. Problems of Education in the Fourth Industrial Revolution Era. Actual Issues of Modern Science. *European Scientific e-Journal*, 27. Ostrava, Czech Republic, ISSN 2695-0243, pp. 39-46 Tuculart Edition. DOI: 10.47451/ped; EOI: 10.11244/ped2024-01-003, 2023.
11. Putra, A. S., Waruwu, H., Asbari, M., Novitasari, D., & Purwanto, A. Leadership in the Innovation Era: Transactional or Transformational Style. *International Journal of Social and Management Studies*, 1(1), 89–94, 2020.
12. Amanchukwu, R. N., Stanley, G. J., & Ololube, N. P. A Review of Leadership Theories, Principles and Styles and Their Relevance to Educational Management. *Management*, 5(1), 6-14, 2015.
13. Tuma, M. 2020. Characteristics of plaing performance the children. Viena,
14. Jovanović, D. The analysis of teacher leadership styles – perceptions of secondary school students. *Facta universitatis, Series: Teaching, Learning and Teacher Education*, 6(1), 11-32, 2022.