



CHAPTER 42

ADAPTED PHYSICAL EDUCATION IN SPECIAL NEED EDUCATION: THE WAY FORWARD

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Introduction

Physical education is very important to the well-being and education of a child. Physical education is an important academic subject that provides students with planned, sequential, curricula and instruction designed to develop motor skills, knowledge, and behaviours for active living, physical fitness, sportsmanship, and emotional intelligence (Society of Health and their physical educators (SHAPE, America), 2013). The primary goal of physical education is to develop a physically literate individual. Physical literacy means the ability to move with competence and confidence in a wide variety of physical activities in multiple environments that benefit the healthy development of a whole person (Adeniji, 2007). It is therefore important for the schools and the teachers in these schools to focus on the holistic development of the students. A holistic student approach emphasizes a variety of teaching styles, developing students' socioemotional intelligence and identities and building a sense of belonging in the school. Ajibua and Momoh (2009) in SHAPE America (2013) stated that physical education has a primary purpose of developing physically literate students and supported that the holistic development of students addresses three crucial learning domains within the physical education curriculum, cognitive or mental skills related to the knowledge of movement, affective, which address growth in feelings or attitude and psychomotor which relates to the manual or physical skills. Physical education can be seen as a subject that can develop the physical, mental and cognitive capability of the school children including the Special Needs Children (SNC).

Special needs children are those children with one disability or another. Special needs children are children in the process of growth or development that have abnormalities or irregularities (physical, mental, intellectual, social, emotional) that require special education services. These children cannot benefit from the conventional classroom because they require special education and related services if they are to realize their maximum potential (Megan, 2020). These sets of children therefore need special needs education in the course of their education. Special needs education is a form of training and care specifically designed for children with disability. Federal Republic of Nigeria [FRN] (2013)



described special needs education as a formal education given to persons with social needs. It is tailored toward Individualized Educational Programmes (IEP). It can be rendered at school, at home and in hospital-bound settings. It is specifically designed and offered to students with special needs, who have reached the criteria of being included. If a child is identified as visually impaired, physically impaired, handicapped, several multiple impaired or other health impaired, that child can be selected to benefit from special needs education. The type of education and training given is specifically determined by the type of disability or health impairment of that individual (Akindutie, 2002). These disabilities range from hearing impairment, visual impairment, and physical or health impairment to learning disabilities. These children need physical education for their optimum growth and development. However, the inclusion of special needs children in physical education has not been possible because they are not able to participate in most of the sports activities in physical education. Adisa (2010) reported that special needs children are excluded from physical activities and this has affected their physical, emotional, and mental growth. Akinyi, Onyango and Aluko (2015) also lamented over the exclusion of the SNC and emphasized that these children feel rejected and dejected in any physical education activities because they are not capable to engage in some physical activities meant for children without disabilities. This creates the need for APE to be included in special needs education (SNE).

Adapted physical education (APE) is a course of adapting, and modifying the activity and or the equipment to meet the special needs of the SNC. APE involves physical education games and activities that have been modified to accommodate students with disabilities or who have gross motor delays (Chroinin, O'Sullivan & Torrey, 2013). APE services have the same objectives as the general physical education; however, the adapted physical educators try to accommodate, modify and personalize the programme to meet the individual needs of children with disabilities. The Irving Independent School District (2020) stated that physical education has a lot of benefits when one engages in physical activities and exercises, it therefore becomes pertinent for students with disabilities to receive high-quality APE.

Some challenges facing the teaching of adapted physical education in schools include insufficient knowledge of Adapted Physical Education, lack of special equipment, an unfriendly school environment, Lack of time for adaptive physical education, Lack of support personnel, and large class size. All these challenges have hindered the inclusion of APE in SNE.

The thesis statement of this chapter is the fact that special needs children need to participate in and enjoy physical activities like other children without disabilities. Studies reported that many children with disabilities are left behind during physical education and recreation, and this has caused them emotional trauma and depression. Many of them in some physical activities meant for become withdrawn with the feeling of despondency. This is where Adapted Physical



Education teachers come in. These teachers should know how to customize physical education to meet the needs of people with disabilities which is adapted physical education. This service, therefore, is that physical education that is adapted to meet the needs of people with disabilities, both for safety and to address a child's specific developmental needs. This chapter, therefore, discussed adapted physical education in special needs education under the following subheadings: adapted physical education, areas of modification in adapted physical education, importance of adapted physical education, adapted physical education teachers or specialists, challenges of adapted physical education, conclusion/suggestions.

Adapted Physical Education

Adapted physical education (APE) is an adapted or modified physical education program designed to meet the individualized needs or other disability-related challenges of special needs students. APE is generally physical education with adaptations and modifications to the general education curriculum. Irving Independent School District (2020) defined adapted physical education as a programme of instruction meant for special needs children where there is modification in activities. APE is an active programme of physical activity rather than a sedentary alternative programme. APE instruction is specified in an individualized education program (IEP) (Irving Independent School District, 2020). Lieberman et al. (2013) stated that the goal of APE is for the child to benefit from the physical education instruction by experiencing success and learning physical activities that will build the foundation for life-long physical activity. The author further added that adaptations may also include narrowing the expectations of students according to their needs. The demand for performance and participation will naturally be adapted to the student's ability to participate.

Adapted Physical Education (APE) is a component of special education services, Ajibua, and Momoh (2010) which ensures that physical education is provided to the student with a disability as part of the child's special education services. There are three areas where you can make adaptations and modifications to the PE curriculum, games, and activities. equipment, rules, and the playing area can all be modified and adapted to better suit the needs of students. By making modifications and adaptations to equipment, rules, and playing area, it can be benefitting to all students. APE is equivalent to watching movies and shows with subtitles; people who are hearing impaired need subtitles when watching movies and shows, but it can also benefit people without hearing impairments. Hence, APE must be assessed as a related service to SNE.

Areas of Modification for Adapted Physical Education

Adaptations or modifications can be made in four areas:

- 1. Instruction.** Instructions are plans and strategies in physical education. These instructions, plans and strategies can be modified or included to help the child be successful in physical education. This means that in the course of physical



education activities, certain instructions and strategies can be altered or changed to suit the specific needs of the child involved. For example, a down's syndrome child may respond to one-word signs as reminders for doing a summersault correctly (Megan, 2020).

2. Rules: Rules can also be modified and adapted to the benefit of the students as well. A rule can be adapted or changed if it allows a special needs child to be successful in physical activities. For example, when playing a team game and sports, making a rule that everyone must touch the ball before scoring helps to ensure the inclusion of all students. The number of players in a game can be changed so that everyone will participate. Example in a game of volleyball, you do not need to have six players on each side for a volleyball game, more or fewer players can do depending on the safety and space which can help students to be more included. Also, when playing a game of football or soccer, all students must play the game on a scooter. A scooter is a motorcycle with an undergone or step-through frame, a seat, and a platform for the rider's feet. So, if playing a game of soccer and you have a student who has mobility issues, have all students play the game on a scooter. Other adapted sports or games are: sit volleyball, beep baseball, or goalball for everyone. Moreover, if the students are working on volleyball skills, a wheelchair-bound student is allowed to serve the volleyball from four feet ahead of the or a serving line (Mcnamara&Pan, 2022).

3. Equipment. Modification of the equipment is a very important area or aspect of APE. Some modifications can be made in some types of equipment for APE. For example, large equipment can be used, lightweight and bright coloured equipment are allowed to accommodate all students. Also, Standard gym equipment can be replaced with other objects that vary in shape, color, size, etc. For example, when playing kickball, provide a large bright orange ball for a visually impaired child to kick. Various equipment have been modified and have given people with disabilities to participate in both local and international games, especially the Olympic games which are tagged as Paralympics and Deaflympics. The Paralympics is featuring a wide range of sporting events between athletes with a range of bodily differences and disabilities for physical disabilities while the Deaflympic is the sports for the deaf. These are international organizations featuring people with disabilities (PWD).



Fig 1. Wheelchair for Basketball



Fig 2. Gymnastic Equipment

4. **Environment.** The environment or the playing areas need to be changed to accommodate the special needs of the children with disabilities. Changing the playing area can be beneficial for all students as well. When playing games, a small-sided games can be played to include more students and have more games going on at the same time. If need be, change the size of the playing area or use tape to define the area (Lieberman et al., 2013).



Fig 3. Fitness Circuit

Importance of Adapted Physical Education

Adapted physical education plays a very significant role in growth and development of special needs children. Recent studies showed that adequate physical education can improve outcomes from health problems that may occur due to inadequate muscular development (Forestry, Kristoyanto, & Ligowo, 2019). Specific benefits of APE, which may be especially essential for students with disabilities include:

a. Physical Improvement

Participation in physical activity and sport leads to improved levels of well-being and physical health. Therefore, APE can help in:

- i. Building strong bones for lifelong resistance to injury
- ii. Building strong muscles to safely support bones and joints
- iii. Improving the health and strength of the heart, lungs, and blood vessels
- iv. Preventing or reducing health problems stemming from obesity, musculoskeletal disorders, and lung capacity problems

b. Mental Improvement

Exposure to physical activities and exercise through physical education classes is not only good for cognitive and health improvement, it is also beneficial to mental improvement. Physical activity improves general mood and wellness in people suffering from anxiety and depressive disorders. It is also linked to



improvements in self-esteem, social awareness, and self-confidence. Therefore, APE helps in:

- v. Improving mood and self-esteem
- vi. Increasing attention span, problem-solving abilities, and motivation
- vii. Providing a sense of accomplishment and confidence
- viii. Reducing symptoms of anxiety, depression, and Attention Deficit hyperactive Disorder (ADHD).

c. Behavioural Improvement

Adapted Physical education helps students learn to focus on specific goals and work by interacting with peers through sports. Therefore, APE helps in:

- ix. Teaching teamwork and important social skills
- x. Improving neuromuscular development, which may have far-reaching consequences for both mental and physical abilities
- xi. Improving the well-being of people with disabilities.
- xii. Giving them the ability to adapt to physical education activities
- xiii. Teaching equality of people with disabilities and those without disabilities. (Mcnamara&Pan, 2022).

Adapted Physical Education Teachers or Specialists

Adapted physical education teacher (APE teacher) is a trained professional who can assess individual student and adapt physical education activities for the benefit of children with special needs. APE specialists serve the invaluable purpose of helping children live their best lives by using their knowledge of the human body and brain. These specialists can help children with a range of disabilities develop strength, skills, health and a strong sense of accomplishment and self-esteem (Forestry, Kristoyanto, &Ligowo, 2019). APE teachers identify unique needs of special needs children and individualize instructions. Hence, they will no longer be frustrated by classes that are too complicated, loud, or advanced for them (Martin & Speer,2011). APE specialists may work at private or public schools or sometimes be contracted by other clients or organizations who work with children with special needs. APE teachers need to undergo special training to become adaptive physical education teachers. They are trained to evaluate and assess motor competency, physical fitness, play, recreation, leisure, and sports skills (Schinke, Tenenbaum, Lidor, &Battochio, 2010). Therefore, APE specialists will need:

a. A bachelor's or master's degree in a related field, such as Physical Education, Kinesiology, or Sports Science.

b. Meet the requirements to teach adapted physical education.

Teacher requirements may include things like:

- i. Obtaining a current and valid teaching certificate,
- ii. Completing a certain number of hours of supervised work under a certified APE Specialist



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- iii. Completing certain courses or credit hours studying adapted physical education
 - iv. The ability to provide positive feedback to encourage students who may suffer from anxiety and boost the self-esteem of all students.

Challenges of Adapted Physical Education

Some challenges facing the teaching of adapted physical education in schools.

a. Insufficient knowledge of Adapted Physical Education

Physical education teachers have insufficient knowledge in this area of education as some teachers are not fully prepared to teach students with disabilities. Some teachers felt that they were not professionally prepared to teach students with disability since they do not have any knowledge in the area, as a result they do not modify their lessons and activities to include students with disabilities.

b. Lack of special equipment

Most schools do not have adapted equipment for the special needs children. Adapted equipment is very important in teaching APE because it is not safe to use the same equipment with the sighted students on students with disability who have visual impairments. Lack of adapted equipment has led to the students with disability not being able to participate in practical physical education lessons and other sporting activities for the fear of getting hurt. Akinyi, Onyango, and Aluko (2015) found that the lack of teaching and learning materials such as textbooks, talking calculators, braille machines, large prints and compact discs, and other sports equipment make inclusive education unsuccessful.

d. Unfriendly school environment

The unfriendly school environment is another challenge facing physical education teachers. Most school environments and buildings do not support inclusion. They have rough roads and the absence of walkways, which makes it difficult for some physically and visually challenged to participate freely in physical education.

c. Lack of time for adaptive physical education

In the case of special needs education, much time is required to adapt activities to cater for the students with disabilities and also design some activities for students without disabilities. APE requires adequate time to adapt activities to include students with disabilities.

f. Lack of support personnel

The lack of support personnel to assist students with disabilities during lessons is another challenge. There are no support personnel or special needs assistants to assist them during lessons. Special Need Assistants are specially trained personnel who assist students with disabilities around the school and during physical education lessons.



g. large class size

Large class has been a major challenge facing APE. According to Federal Republic of Nigeria, National Policy on Education [FRN] (2013), the pupil-teacher ratio is 1:30–35. A class that has more than this ratio can be termed a large class. This large class can affect student-teacher interaction in the class and preparation for inclusive physical education lessons. APE requires enough accommodation for the students as well as to accommodate the adapted equipment and materials.

Implications on Special Needs Education

Special needs education (SNE) is designed for children with various forms of disabilities. The inclusion of APE in the SNE is a very good step in the right direction for the benefit of the SNC. The teaching of APE has a lot of implications to the school setting and to the special needs child. Hence it must be prepared based on the requirement of the individual disability. In view of this, there must be proper diagnosis and proper placement of special need children in special needs education. The special need education curriculum must be reviewed to accommodate recent events and occurrences in the society especially use of adapted equipment and environment in sports. The APE teachers must also be adapted in their knowledge and expertise. They must have knowledge of different adapted equipment for physical education. This implies that the teacher must be trained hence, APE should be included in general education courses in teacher education programme.

In totality, the presence of APE in SNE will give SNC opportunity to increase their physical development, physical capability and develop valuable skills that will be needed to succeed in life. This implies that SNC can now be well equipped to develop their potentials in different sports activities so as to participate in international sport events for the growth of the nation. Hence, a special need child will not only satisfy himself but contribute to the society.

Another implication is that awareness has been created on the impact of APE in holistic development of individuals, hence SNE should be seen as a successful plan to the growth and development of a special need child. Then every special need child should be given an opportunity to be a partaker of this great education programme.

Conclusion

Special needs education aims at building a universal education system that promotes equal rights and opportunities for all persons regardless of their social status. This gives children with disabilities the opportunity to enjoy physical education like others without disabilities. This APE needs to be done with regard to the provision of special equipment and teaching materials to enhance its implementation and success. The implementation and success of APE have been challenged by some factors which include the teacher's problem. Some physical education teachers lacked adequate professional preparation and knowledge in



inclusive education to handle adaptive education. Some of these challenges have affected the proper implementation of APE. Another important issue is the lack of adequate equipment and materials to enhance students' participation. Based on these, some suggestions have been made to improve adapted physical education in special needs education.

Suggestions

The following suggestions are made:

1. Physical education teacher education programs in Nigeria should incorporate APE in their curriculum to fully equip physical education teachers to teach students with special needs.
2. Schools that operate on inclusive bases should be funded and resourced adequately to enhance their success.
3. Regular in-service training is needed to update physical education teachers' knowledge on current trends in dealing with students with special needs.
4. Research is required to ascertain the challenges of inclusive physical education in all-inclusive schools.
5. Provision of support staff in the form of personnel such as volunteers, teacher aides, peer tutors, and education specialists. cannot be underestimated as it promotes successful inclusion.

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