

The status of Physical Education in BRICS nations

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(Submitted: 25 January 2024; Revision Accepted: 12 June 2024)

DOI: <https://doi.org/10.37597/ajphes.2024.30.3.9>

Abstract

This study investigates the state and status of Physical Education in the BRICS countries (Brazil, Russia, India, China, and South Africa), recognising its pivotal role in developing psychomotor, social, emotional, and cognitive skills, as well as combatting lifestyle-related diseases like obesity. Despite its potential, Physical Education often has to deal with neglect and marginalisation in school curricula. This research addresses the dearth or lack of comparative literature on Physical Education across BRICS nations, with the aim of shedding light on the subject's implementation and its impact on learners' health. Grounded on Bronfenbrenner's Ecological Systems Theory, the study explores how various ecological systems influence learner-engagement in Physical Education. It also provides a detailed overview of the education systems in Brazil, Russia, India, China, and South Africa, emphasising key features relevant to Physical Education. These include governance structures in these countries ranging from centralisation to mixed models, with diverse implications for curriculum implementation. This research contributes to a deeper understanding of the dynamics shaping Physical Education in the BRICS nations, offering recommendations for enhancing its efficacy in promoting learners' health and well-being. In addition to bridging the knowledge gap in comparative studies, this study's findings inform policy and practice for the betterment of Physical Education across diverse educational and cultural contexts.

Keywords: Physical Education, status, health, BRICS countries, education systems.

How to cite this article:

Oelofse, V., Van Der Merwe, N., Du Toit, D., & De Ridder, J.H. (2024). The status of Physical Education in BRICS nations. *African Journal for Physical Activity and Health Sciences*, 30(3), 503-525. DOI: <https://doi.org/10.37597/ajphes.2024.30.3.9>

Introduction

Physical Education is crucial for the development of learners' physical, social, emotional, and cognitive skills, as well as combatting chronic diseases of lifestyle such as obesity (UNESCO, 2015). It also fosters the development of mental and moral qualities (Kajanus, 2016). Despite its importance, Physical Education often faces neglect and is viewed as less significant compared to "academic" subjects (UNESCO, 2015). Studies have shown that it receives less time on the school timetable which leaves Physical Education teachers feeling marginalised (Burnett, 2021; Moy *et al.*, 2021; Wang *et al.*, 2022). Furthermore, there's been a concerning

decline in physical activity and sports participation among schoolchildren in recent years in many countries (Silva *et al.*, 2022; Wang *et al.*, 2022), a situation that could be attributed to the low emphasis on Physical Education in schools.

This study focuses on analysing the status of Physical Education in the BRICS countries (i.e., Brazil, Russia, India, China, and South Africa). Although new countries (Egypt, Ethiopia, Iran and the United Arab Emirates) have been added to the organisation (now called “BRICS +”) in January 2024 (British Broadcasting Corporation [BBC], 2024), the focus of this study is on BRICS founded in 2009 (with South Africa joining in 2010) (BRICS Brazil, 2020). The BRICS countries combined to form an organisation with the goal of developing and promoting their economies by coming together, discussing global development and relevant issues, building long-lasting relationships and sharing common interests and solutions (BRICS Brazil, 2020; Chin *et al.*, 2019). As health and education form part of the fields of study being invested in by BRICS (BRICS Brazil, 2020), one of the organisations that has been formed to promote wellness and healthier lifestyles in its member states through various disciplines, including Physical Education, is the BRICS Council for Exercise and Sport Science (BRICSCESS) (Chin *et al.*, 2019). While BRICSCESS has been involved in studies comparing best practices in Physical Education within individual BRICS countries in the past (Chin *et al.*, 2019), no literature could be found comparing Physical Education across all five nations, indicating a gap in the literature that this study aimed to bridge.

Theoretical framework

This study was conducted within the framework of the Bronfenbrenner’s Ecological Systems Theory (EST) (Bronfenbrenner & Morris 2006; Yang, 2021). The EST suggests there are five socially-constructed systems which influence the development of children’s learning (Yang, 2021). These five systems are the microsystem, the mesosystem, the exosystem, the macrosystem and the chronosystem (Ozaki *et al.*, 2020). The microsystem involves the learner’s immediate environment which influences her directly, for example the learner’s school, neighbourhood or house or even people like the learners’ teacher, parents or classmates (Ozaki *et al.*, 2020; Yang, 2021).

The mesosystem is the link between the microsystem and the learner’s attitude. For example, the learner’s participation in Physical Education classes will be influenced by his or her relationships and behaviour at home, with teachers and also towards classmates (Ozaki *et al.*, 2020; Yang, 2021). The exosystem constitutes factors that influence the microsystem but do not influence the learner directly, for example parents’ financial situation, mass media and school policies (Ben-David & Nel, 2013; Ozaki *et al.*, 2020; Yang, 2021). The macrosystem includes factors that focus on how cultural elements influence a child’s development, such as the attitudes, beliefs, values and ideologies in the systems of

a culture or country, socio-economic status, wealth, poverty, and ethnicity (Ben-David & Nel, 2013; Bronfenbrenner & Morris 2006). The chronosystem entails factors that can influence a learner over a time period, for example, becoming mature, and developing own perceptions of personal lifestyle or historical events (Ben-David & Nel, 2013; Ozaki *et al.*, 2020; Yang, 2021).

Given the above theoretical underpinning, it is, therefore, reasonable to assume that Physical Education in each of the BRICS countries would be influenced by characteristics or aspects of the ecological systems in each of the countries, warranting the need for this study. One such system is the educational structure of a country, and therefore, for the purpose of a clearer contextual picture of the state and status of Physical Education within the macrosystem of each country, it is necessary to give a brief synopsis of the current education systems in each of the BRICS countries.

Physical education within the education systems of the BRICS countries

Brazil

Pre-primary education in Brazil includes learners between birth to seven years. One of the objectives of pre-primary education is to develop the learner emotionally, physically, mentally and socially (WDE, 2006). Primary education in Brazil is compulsory for all learners between the ages of seven and 14 years, including Physical Education as a compulsory subject (WDE, 2006). Secondary education is available to all in public schools without an entry examination (WDE, 2006).

Russia

The Russian education system consists of the following levels: level 0 - Preschool education (ranging from two months to six years); level 1 - Primary general education (duration of 4 years); level 2 - Basic general education (duration of 5 years) and level 3 - Secondary general education (2 years duration). To graduate from school in Russia, learners must write the mandatory Unified State Examination (EGE) including compulsory subjects like the Russian language and mathematics, along with additional subjects that learners may choose from. These subjects include foreign languages, Physics, Chemistry, Biology, Geography, Literature, History, Social Sciences, and Computer Science (EXPATICA, 2023).

India

Early childhood-care and education are divided into two groups by A National Curricular and Pedagogical Framework for Early Childhood Care and Education (NCPFECCE), i.e., 0-3 years and 3-8 years (Ministry of Education of India [MEI], 2020). The curricular framework structure ranges from ages 3-8, 8-11, 11-14, and 14-18 years, composed of the Foundational Stage (in two parts, i.e., 3 years of pre-school and two years in primary school in Grades 1-2, covering ages 3-8

years), Preparatory Stage (Grades 3-5, ages 8-11), Middle Stage (Grades 6-8, ages 11-14 years), and Secondary Stage (Grades 9-12 in two phases namely, Grades 9 and 10 in the first and 11 and 12 in the second stage, ages 14-18 years) (MEI, 2020).

China

China's school structure consists of primary school for Grades 1-6 (6-12 years), Junior / Lower secondary school including Grades 7-9 (12-15 years), and Senior secondary school Grades 10-12 (15-18 years). The Chinese learners write examination at the end of their lower secondary school and undertake the final assessment at the end of Grade 12 to gain access to the next phase of learning (Organisation for Economic Co-operation and Development [OECD], 2016).

South Africa

In South Africa, the school structure consists of the Foundation Phase (Grade R-3), Intermediate Phase (Grades 4-6) Senior Phase (Grades 7-9) and the Further Education and Training Phase (FET) (Grades 10 -12) (DBE, 2020). Learners have to write a compulsory national examination at the end of Grade 12 to complete their school career (Department of Basic Education [DBE], 2020).

It is notable that the education systems of the BRICS countries reviewed all have centralised governance systems, as the countries have a national education ministry that governs and controls education policy, curriculum and practice (Vos & De Beer, 2018). However, according to Vos and De Beer (2018), the education governance systems of Brazil, India and South Africa can be viewed as mixed governance systems (centralised as well as decentralised) as the central ministries delegate their powers to provincial governments or states to implement the national school curriculum and execute the national education guidelines. In this regard, decentralised governance systems can present challenges with regards to the implementation of subjects such as Physical Education because state, provincial or city governments can adapt aspects such as assessment guidelines and allocation on the school timetable, as well as funding, according to their own discretion (Vos & De Beer, 2018). Russia and China have largely centralised education governance systems, where the national government controls the funding of schools and develops the curriculum, including that of Physical Education (Vos & De Beer, 2018). Given the influences of different education systems, alongside findings of various studies showing challenges in the implementation of Physical Education in individual BRICS member states since 2010, the study aims to assess the status of Physical Education in BRICS countries and to provide policy recommendations for its improvement, ultimately benefitting the health and development of learners in these nations.

Methodology

Research design

This study used a qualitative approach involving document analysis. The researchers analysed and interpreted the data collected within an interpretivist perspective considering Bronfenbrenner's theoretical framework, as well as the different education systems with regard to the learner, teacher, school, state, provincial and national policy makers, with the goal of making recommendations for best practices in Physical Education in the BRICS countries.

Data collection

Data were collected by means of the document analysis method, as proposed by Harvey (2022). Specifically, the following documents on the various aspects of the school system obtained from organisations and institutions from the BRICS countries were perused: School-curriculum, education policy, and laws relating to education and training. The documents were extracted from research databases such as EBSCOhost, Google Scholar, Web of Science, and the educational websites of each of the BRICS countries. The term "Physical Education" was searched in all the documents, and any data related to the state and status of Physical Education in the middle and/or secondary school in the specific country was marked and coded. In the original search, 46 documents were extracted from which 16 were included in the actual analysis. Non-English documents were translated (and back-translated) using Google Translate. These 16 documents and the key points of the information analysed, are shown in Table 1.

Data analysis

Inductive content analysis of the data extracted from the documents was conducted according to the guidelines for qualitative content analysis suggested by Belotto (2018) and Maree *et al.* (2016). The content analysis of the documents entailed a detailed and systematic examination of the content, coding of the content, and identifying patterns and themes regarding the state and status of Physical Education in the BRICS educational documents (Maree *et al.*, 2016).

Trustworthiness and credibility

Trustworthiness is important in qualitative research to establish whether the study findings are credible. To enhance the credibility of the findings, triangulation was applied by comparing the content of different policy or education documents in each country. Peer debriefing was conducted by having two independent qualitative research experts engage in the document analysis process in addition to the first author's analysis. Subsequently, the outcomes of these analyses were discussed in separate peer-debriefing sessions. Furthermore, conducting an audit trail from the beginning of the analysis and providing a rich description of the research process, enhanced the transferability of the study (Belotto, 2018)

Table 1: Main documents analysed and key points

Country	Document title	Type of document	Author(s)	Key points (document number)
Brazil	1. National Base Common Curriculum	National school curriculum document	Brazil Government Ministry of Education (BGME, 2018)	- Purpose and approach (1)
	2. Physical Activity Guide for the Brazilian Population	National governmental guideline	Brazil Government Ministry of Education (BGME, 2021)	- Time allocation (2)
	3. National Curriculum Guidelines for Undergraduate Courses in Physical Education (DCNEF)	National governmental guideline for Higher Education	National Council of Education (BNCE, 2018)	- Teacher training (1, 2, 3) - Assessment (1)
Russia	4. Physical Culture and Sports in the Russian Federation Federal Law No.329	Federal law	The Russian Federation Council (RFC, 2023)	- Purpose and approach (4, 6)
	5. Federal State Educational Standard of Basic General Education	Education policy document	Ministry of Education of the Russian Federation (MERF, 2015)	- Time allocation (4, 5)
	6. Physical Culture and Sports Complex "Ready for Labor and Defense" (GTO)	National program document	Ministry of Sports of the Russian Federation (MSRF, 2017)	- Teacher training (4, 5) - Assessment (4, 6)
India	7. National Policy on Education	National Education Policy	India Ministry of Education (IME, 2020)	- Purpose and approach (7, 8, 9, 10)
	8. Secondary School Curriculum Class IX – X 2020-21	National curriculum document for CBSE schools	Central Board of Secondary Education (CBSE, 2020)	- Time allocation (8, 9, 10)
	9. Mainstreaming Health and Physical Education IX-XII	National school assessment document	Central Board of Secondary Education (CBSE, 2022)	- Teacher training (7, 10)
	10. National Curriculum Framework for School Education 2023	National school curriculum document	National Council of Educational Research and Training (NCERT, 2023)	- Assessment (7, 8, 9, 10)
China	11. Compulsory Education Law of the People's Republic of China	National Law	(Ministry of Education of China (MOEC, 2009)	- Purpose and approach (11, 13, 14)
	12. China's National Plan for Medium and Long-Term Educational Reform and Development (2010-2020)	Public planning document	State Council of the People's Republic of China (SCPRC, 2010)	- Time allocation (12, 13)
	13. Sports Law of China (2022)	National Law	China Standing Committee of the National People's Congress (CSCNPC, 2022)	- Teacher training (11, 12)
	14. State Council of the People's Republic of China	Official website (several posts)	State Council of the People's Republic of China (SCPRC, 2017 - 2023)	- Assessment (12, 13)
South Africa	15. Curriculum and Assessment Policy Statement (CAPS)	National school curriculum document	Department of Basic Education (DBE, 2011)	- Purpose and approach (15)
	16. National Qualifications Framework Act	National Qualifications Act	Department of Higher Education and Training (DHET, 2015)	- Time allocation (15) - Teacher training (16) - Assessment (15)

Note: Document numbers in the “Key points” column refer to the documents in the “Document title” column, where the key points were found.

Ethical clearance

The Ethics Committee of the Faculty of Education, North-West University, South Africa, approved the study (NWU - 01007 - 21 - A2). Since the study was based on the analysis of educational documents already accessible in public domain, there were no major ethical issues involved. Consequently, the research was designated as ethically “no-risk” study and received necessary clearance.

Findings and Discussion

The aim of this study was to investigate the state and status of Physical Education in the BRICS countries. The themes that emerged from the data analysis were: *Approach and purpose of Physical Education, Status of Physical Education*, within which the categories of *Time allocation in the curriculum, The issue of a stand-alone and compulsory subject, Training and qualifications of teachers, and Assessment in Physical Education*. These themes and categories are presented in detail and discussed below.

Approach and purpose of Physical Education

In the Brazilian National Base Common Curriculum (Brazil Government Ministry of Education [BGME], 2018), a description of Physical Education reads: “*Physical Education should pursue its identity as a field of study that is key for the understanding of human beings as producers of culture.*” (BGME, 2018)

The Physical Education curriculum in Brazil thus emphasises social and cultural aspects, which aim to cultivate autonomous and critical learners in various Physical Education themes such as games, sports, gymnastics, martial arts, dance, and outdoor activities (Betti *et al.*, 2015). Coledam *et al.* (2018) echo this sentiment, emphasising the goal of enabling learners to make informed decisions about body culture and physical activities. They highlight that the curriculum focuses not only on content but also on thematic areas like the human organism, movement and health, aesthetics, contemporariness, media, as well as leisure and work. Lavoura and Neves (2019) note that the curriculum aims to equip learners with essential skills for understanding and caring for their own bodies and those of others, as well as fostering autonomy in using bodily movement culture for various purpose

However, Neto *et al.* (2021) point out the challenge of Brazil’s decentralised education system is that in view of its more than fifteen different approaches to school Physical Education, each deeply influenced by its socio-political context, a lack of uniformity in the curriculum across the states is created. In the context of EST (Bronfenbrenner & Morris, 2006), this situation demonstrates the effect of the exosystem (decentralised governance) on the mesosystem (teachers’ and learners’ attitudes towards Physical Education) and indirectly, the learner’s physical and health development in the microsystem.

The Russian Federal Law of Physical Culture and Sports (Russian Federation Council [RFC], 2023) articulates the purpose of Physical Culture – or Physical Education as it is often called in Russia - as the: “...*formation of students' physical strength, motor skills, and knowledge of physical culture, taking into account individual abilities and health status, creation of conditions for involving students in physical culture and sports, preparing them for work and functioning in life...*” (RFC, 2023: Article 28)

As stated by Glotova and Hastie (2014), Physical culture and sport aim to improve health, develop physique, and enhance work fitness. The Russian Federation has prioritised children's health and fitness, resulting in reforms in Physical Education. These changes are reflected in policies such as the Russian Federal Law of Physical Culture and Sports (RFC, 2023) and the Government Order "On Strategy for physical culture and sports development in Russia up to 2030" (Lutsenko *et al.*, 2022). Reforms in this Russian macrosystem which ultimately affect the physical and social development of the learner in the microsystem (Bronfenbrenner & Morris, 2006), encompass increased weekly Physical Education exercise hours, training for teachers, modernising sport facilities, organising events, and adding new sports like the Scandinavian walk, combat, and skiing. Monitoring learners' fitness is conducted through standardised assessments in Physical Education (Komova *et al.*, 2015).

According to the National Council of Educational Research and Training (NCERT, 2023), the Indian National Curriculum Framework states that the Health and Physical Education curriculum is written from an approach of the holistic development of children, with guidelines and standards for the development of physical health, mental health, the mind-body connection and wellness of children. Specifically, the NCERT indicates that: “*Physical education is important for both physical and mental health and development. It helps improve a child's muscular and cardiovascular strength, flexibility, endurance, motor skills, and mind-body connection and wellness.*” (NCERT, 2023)

The Health and Physical Education subject further aims to provide an understanding of the overall importance of health and physical fitness (Borkar, 2021; NCERT, 2023), within the broader rationale that: “...*developing strength, endurance, and perseverance is not just in terms of physical capacities but also related to capacities of the mind. Such capacities are foundational for not just well-being but also contribute positively towards autonomy and democratic participation*” (NCERT, 2023).

To further improve the health and fitness levels of Indian children as well as that of adults, the national project “Fit India” was implemented in 2019 by the Indian Ministry of Youth Affairs and Sports (IMYAS) and the Ministry of Education (IMYAS, 2021).

In China, the emphasis in the National Plan for Medium and Long-Term Educational Reform and Development (2010-2020) (State Council of the People's Republic of China [SCPRC], 2010) as well as the Compulsory Education Law of the People's Republic of China (Ministry of Education of China [MOEC], 2009) is on moral education. Accordingly, the document states that: *"A school shall place moral education in the first place, apply moral education in education and teaching, carry out social practices that fit the age of students; and so, form an ideological and moral education system whereby the school, family and society collaborate with one another, so as to encourage the students to have good morals and form a habit of good conduct."* (MOEC, 2009: Article 36).

According to Kajanus (2016), Chinese Physical Education prioritises the understanding of sports and health, fostering resilience and cooperative skills. This approach is grounded in a blend of principles from classic Confucian philosophy, focusing on self-cultivation of the body, heart, and mind, along with Maoist traditions of uniformity and militaristic mass sports. However, there has been a remarkable rise in concern with regards to the health and fitness levels of the Chinese youth in the last two decades, as studies showed that the Chinese youth were physically inactive (Liu *et al.*, 2023), unfit (MOEC, 2021b), and overworked which led to near-sightedness and chronic diseases (Yiting *et al.*, 2023). This led to a series of curriculum reforms such as in the Sports Law of China (China Standing Committee of the National People's Congress [CSCNPC], 2022), China's Education Modernisation 2035 Plan (SCPRC, 2019) and the 14th Five-Year Basic Education Plan (2021-2025).

Physical Education in the South African national curriculum, called the Curriculum and Assessment Policy Statement (CAPS) (DBE, 2011), forms one part of the learning area called Life Skills in the Intermediate (Grades 4-6) and Senior (Grades 7-9) Phases, and one of six topics in the Life Orientation subject in the Further Education and Training (FET) Phase (Grades 10-12). The approach to Physical Education in the South African curriculum is thus embedded in the purpose of Life Orientation, which is:

"...the study of the self in relation to others and to society. It addresses skills, knowledge, and values about the self, the environment, responsible citizenship, a healthy and productive life, social engagement, recreation and physical activity, careers and career choices. These include opportunities to engage in the development and practice of a variety of life skills to solve problems, to make informed decisions and choices and to take appropriate actions to live meaningfully and successfully in a rapidly changing society." (DBE, 2011)

The purpose of Life Orientation correlates with the general aim of the South African school curriculum of preparing learners for living in society and the country:

“...equipping learners, irrespective of their socio-economic background, race, gender, physical ability or intellectual ability, with the knowledge, skills and values necessary for self-fulfilment, and meaningful participation in society as citizens of a free country.” (DBE, 2011)

Against this background, the purpose of Physical Education is to equip learners for life-long learning through physical activity, within a life-skills approach (DBE, 2011).

Status of Physical education

The sub-themes identified under the theme of the status of Physical Education in the curricula of the BRICS countries, are *Time allocation and stand-alone status in the curriculum*, *Training and qualifications of teachers*, and *Assessment in Physical Education*.

Time allocation and stand-alone status in the curriculum

Under the Brazilian National Education Law (OECD 2021), state and city governments are responsible for developing their own curricula to achieve the competencies and guidelines set by the National Base Common Curriculum (BGME, 2018), including the development of classroom materials, professional teacher training and learner assessments to ensure that the national curriculum is effectively implemented (Costin & Pontual, 2020). As stated on page 24 of the National Base Common Curriculum: *“Any project aimed at encouraging physical activity, therefore, should be proposed by the teacher himself or herself, submitted to the pedagogical team for approval, and then included in the school’s proposed work plan.”* (BGME, 2018)

Coledam *et al.* (2018) point out that, although Physical Education is compulsory by law, no specifications regarding the number or duration of classes are provided in the BGME. This situation resulted in most cities and states adopting one to two classes of Physical Education per week, and a relatively low status of the subject exists, even though the Physical Activity Guidelines for the Brazilian Population (BGME, 2021) state that: *“The school community must provide and support physical education in the same way it does with other disciplines, with the application of content, assessment and professional development.”* (BGME, 2021)

In Russia, Physical Education is mandatory from Grades 1 to 12, and the time allocation for Physical Education is 102 hours per year, which translates to three lessons of 45 minutes to one hour per week (Botagariyev *et al.*, 2021). The time allocation was increased from one to two hours per week as part of the renewed focus on Physical Culture and Sport which was initiated and implemented by the government as part of the Federal programme’s “Development of Physical Culture and Sports 2016-2020” (Ministry of Sport of the Russian Federation [MSRF], 2015).

In the National Curriculum Framework of India, Physical Education is allocated 103 hours per year in the middle stage of school (Grades 11-14) and 100 hours per year in the secondary stage (Grades 9-12), which translates into two Physical Education lessons per week (NCERT, 2023). In the National Curriculum Framework, which is mandated by the NCERT board, Physical Education is an elective subject in Grades 11 and 12, as the document states that “*students will be given increased flexibility and choice of subjects to study, particularly in secondary school - including subjects in physical education...*” (Indian Ministry of Education [IME], 2020). The Central Board of Secondary Education (CBSE, 2022) has recently made Health and Physical Education a compulsory part of the Grade 12 curriculum and examinations. In terms of the EST (Bronfenbrenner & Morris, 2006), the differences between the curricula with regards to time allocation and whether the subject is compulsory, is another example of how the exosystem can influence the microsystem of learners in school, as too little time spent in Physical Education can hinder the development of the child.

In contrast, as part of the education reform of the last few years in China, one hour of physical activities per day as part of Physical Education and Health, is mandatory from Grade 1 to the second year of college, and in the elementary and middle school phases, 20 minutes of exercise must also be given before the first class of the day (SCPRC, 2021). This increased time allocation forms part of the education reform, and has already influenced the physical health of Chinese learners, as stated in the “Youth of China in the new era” white paper published in 2022 by the State Council (SCPRC, 2022): “*In schools, as the class hours for physical education continue to increase, students study academic courses in class, and engage in physical activities on the playground. More than 37 million rural students receiving compulsory education have benefited from the student nutrition improvement program, and their physical health has markedly improved. In 2018, 92 percent of students aged between 14 and 19 passed the physical fitness test, and the proportion of those rated good or excellent increased substantially.*” (SCPRC, 2022).

In the South African curriculum where Physical Education constitutes one of the multiple topics of the Life Skills subject (Intermediate Phase) or Life Orientation (Senior and FET Phases), two hours per week are allocated to the subject Life Skills / Life Orientation, of which one hour per week is allocated to Physical Education (DBE, 2011). Although participating in physical activities in Physical Education for one hour per week is insufficient to improve the learners’ physical fitness levels, the one period of Physical Education per week is stated to rather “*...focus on practical physical and mass participation in movement activities for enjoyment and enrichment purposes, with a view to encouraging learners to commit to and engage in regular physical activity as part of their lifestyle.*” (DBE, 2011)

Training and qualifications of teachers

In Brazil, a teacher is required by legislation to do initial training at a college or university to obtain a degree in pedagogy, which usually lasts four years. Continuing education programmes are also offered by education departments in the Ministry of Education (Da Silva Micarello *et al.*, 2023). For Physical Education teacher-training specifically, the National Council of Education (BNCE) created the new National Curriculum Guidelines for Undergraduate Courses in Physical Education (DCNEF) in 2018, which indicates that Physical Education teacher training must incorporate a "...*generalist, humanist and critical academic-professional training, qualifying an intervention based on scientific rigour, philosophical reflection and ethical conduct*" (BNCE, 2018). It is stated in the national curriculum that: "*Physical Education teachers are now in greater demand as regards their professional qualification and the use of their knowledge, especially with respect to the planning of activities that will prove instrumental in meeting students' interests and needs.*" (BGME, 2018)

However, Firmino Goes and Testa (2023) point out that the structuring of pedagogical proposals to present to school and municipal boards is still a major challenge in the implementation of Physical Education in Brazilian schools, as teachers are not specifically trained to develop such projects. Other challenges in Physical Education teacher training involve the pre-service teachers' internships, where Cardoso de Medeiros Filho *et al.* (2023) highlight the scarcity of methodological teaching materials and limited access to schools where quality Physical Education is presented. The Physical Activity Guide for the Brazilian Population (BGME, 2021) does provide recommendations for Physical Education teacher training. Rather, it states that, "*The school community must guarantee and value working conditions (materials and spaces) and professional qualification (specialised, continuing training and pedagogical support) that favour the quality of physical education classes.*" (BGME, 2021)

In Russia, students can become teachers in several different ways: the most popular are vocational training institutions (teacher training colleges) that are funded by local governments, and higher education institutions which include classic universities, specialised teacher training higher education institutions, private universities and non-pedagogical universities (Valeeva & Kalimullin, 2019). In the programme entitled, "Physical Education and sport development in the Russian Federation for the period of 2016-2020" (Komova *et al.*, 2015) as well as the Physical Culture and Sports Law (RFC, 2023), it is recommended that Physical Education teachers should be provided with retraining every five years as part of professional development reforms.

There are different pathways to become a Physical Education teacher in India, varying from a one-year diploma in primary education with Physical Education as a subject, to a four-year Bachelor's degree at one of several universities offering the programme (Lowry, 2022). The Indian Express newspaper reports that there is a shortage of more than 700 000 Physical Education teachers in India, due to relatively low salaries for such teachers, a lack of infrastructure and equipment at schools, and poor awareness of the value of Physical Education among parents and students (Indian Express, 2023).

In China, the official website of the SCPRC (2020c) indicates that there is a severe lack of Physical Education teachers in Chinese schools and that: *"The tendency of employers to have a strong preference for individuals with diplomas from key universities must be reversed, and the level of fitness must be included during their assessment of candidates..."* (SCPRC, 2020c)

However, the educational reform in China includes the planned increase in qualified Physical Education teachers (SCPRC, 2019). In this regard, an increase in the number of teachers has already been reported, as reflected in the following statement: *"China has seen a marked improvement in its physical and aesthetic education at primary and middle schools over the past five years, with more teachers and facilities in place, according to the Ministry of Education on Dec 14."* (SCPRC, 2020a).

In South Africa, although a four-year qualification (either a four-year Bachelor of Education or a three-year Bachelor degree together with a one-year Post-Graduate Certificate in Education - PGCE) (Department of Higher Education and Training [DHET], 2015) is required to teach in schools, only two of the 26 public universities offer a four-year Bachelor's degree of education with Physical Education as a major (North-West University, 2023; University of Pretoria, 2023). In other universities, a semester or a unit of a Physical Education module is offered as part of Life Orientation, and often only as part of a PGCE (Kruger, 2021). Burnett (2020) and Stroebel *et al.* (2019) identify the lack of Physical Education specialist teacher training options in South African universities as one of the causes of the shortage of qualified and trained Physical Education teachers in the country.

Assessment in Physical Education

According to Costin and Pontual (2020), even though there are national outcomes for education as well as specific competencies and skills set out for Physical Education in the National Base Common Curriculum, Brazil's mostly decentralised education system creates a challenge for assessment in Physical Education. The reason for this challenge is that state and city governments must develop their own curricula and learner assessments to achieve the aims of the national curriculum, which leads to malalignment and differences regarding the

quality of assessment in the subject (Costin & Pontual, 2020). Rather than provide assessment details, the Physical Activity Guide for the Brazilian Population (BGME, 2021) urges Physical Education teachers to: *“Seek to improve the quality of their classes through training and exchange of experiences on the curriculum, pedagogical practices and assessment.”* (BGME, 2021)

In the Physical Culture and Sports in the Russian Federation Federal Law, formal annual assessment in Physical Education is mandatory: *“...conducting annual monitoring of physical fitness and physical development of students...”* (RFC, 2023: Article 28, number 7)

The school can, however, develop its own assessment system: *“A general educational establishment is now free to choose the system of grading, forms, procedure and regularity of assessments according to its charter and the requirements of the Education Law.”* (UNESCO, 2011)

Assessment of Physical Education in the Indian “Mainstreaming Health and Physical Education” assessment document (CBSE, 2022), developed by the Central Board of Secondary Education to mainstream the assessment of Physical Education across the country, provides specific prescriptions for the assessment of each of the four strands of Physical Education (games/sport, health and fitness, health and activity card, and social empowerment through work education and action) in the secondary school. In this regard, the Indian government states that: *“Students will be assessed in each of the strands based on evidence such as direct observation, checklists, and/or use of video.”* (CBSE, 2022)

Indian learners also have to write a Health and Physical Education examination paper as part of the final national examinations at the end of Grade 12, which is taken into account when applying for admission to a tertiary institution (CBSE, 2020).

In China, the State Council has increased the required scores on the Physical Education test in the high school entrance examinations to the same level as those of languages and mathematics, in an effort to improve learners’ physical fitness levels when proceeding to high school (SCPRC, 2020b). Furthermore, the China National Assessment of Education Quality - Physical Education & Health in 2015 (CNAEQ-PEH, 2015), is a national assessment protocol developed by the Ministry of Education of the People’s Republic of China (MOEC) for Grade 4 and Grade 8 learners which is used in Physical Education in these grades (Wu *et al.*, 2019). The Ministry of Education has furthermore mandated annual fitness testing within Physical Education class time, by means of the Chinese National Student Physical Fitness Standard (CNSPFS) battery (MOEC, 2017).

In the South African curriculum, the assessment of Physical Education falls into two broad categories, viz participation, where the learner is awarded marks for participating in most Physical Education periods, and movement performance, where the performance of movements is assessed (DBE, 2011). However, few details on the assessment are provided in the curriculum: *“The teacher will observe whether the performance of a movement has a desired outcome, focusing on the overall performance of the movement rather than the detailed mechanics of each movement. However, once a teacher has gained confidence and knows how to break down a motor skill and movement sequence down into different parts, additional criteria can be added to assess the performance in greater depth.”* (DBE, 2011)

In summary, when examining elements such as time allocation, subject status, teacher training, and assessment priorities within subject curricula and guidelines, Physical Education appears more robust in Russia, India, and China compared to Brazil and South Africa. Within the national school curricula, which constitute the exosystem in the EST (Bronfenbrenner & Morris, 2006), these nations dedicate more time, prioritise teacher education, and offer a more detailed assessment guidelines for Physical Education. Nevertheless, substantial challenges persist in implementing Physical Education curricula and policies across all BRICS countries, marked by regional disparities in resources, infrastructure, and qualified Physical Education teachers.

Education reforms in Physical Education are evident in various initiatives, including Brazil's new common curriculum, Russia's curriculum reforms and the national "Ready for Labor and Defense" (GTO) complex, India's "Fit India" programme, and China's emphasis on Physical Education and Health through increased physical activity. These reforms have yielded positive outcomes such as enhanced physical fitness, heightened awareness of physical activity and its health benefits, and improved classroom climate, contributing to students' overall well-being and motivation.

Strengths and limitations of the study

The strengths and limitations of this study should be taken into account when interpreting the findings. The study's strengths include the comprehensiveness of the document extraction and analyses, providing a rich source of data and representing multiple perspectives of Physical Education in national policies. However, the study's constraints comprise the fact that some documents had to be translated from Russian or Portuguese to English, which might have led to some nuances being lost in translation. Also, as Kutsyuruba (2023) stated, the content of documents may sometimes be biased or selective as they were created for specific purposes. To minimise these shortcomings, the researchers critically evaluated the context and purpose of the documents analysed.

Conclusions

Although the implementation of quality Physical Education in BRICS countries is challenging, the status of Physical Education in Russia and China is exemplary, due to numerous governmental reforms in the subject aimed at improving the health of learners and the general population. The influences of these reforms show that changes in the macrosystem of a country (national policies and national school curricula which seem to have influenced the beliefs and attitudes in the systems of these countries), could have an indirect impact on the learners' microsystem (positive changes in learners' physical health and fitness). The upgraded status of Physical education in Russia, India, and China through governmental reforms has positively influenced public awareness and curriculum adaptations. In general, however, socio-economic disparities, still hinder effective national Physical Education policy implementation in BRICS countries.

Policy recommendations

One of BRICS's objectives is to work together and share best practices to achieve sustainable development goals, which include health, wellness and education (BRICS Brazil, 2020; Ivey, 2023). In line with the Russian and Chinese governments who have elevated the status of Physical Education as part of their national educational reforms to enhance the health and well-being of their people (MOEC, 2021a; MSRF, 2015), a policy recommendation for BRICS as well as BRICSCESS entails the recognition and promotion of the importance of implementing quality Physical Education for people's health development, accompanied by appropriate resource support. For countries where the status of Physical Education is perceived as low, like Brazil and South Africa, curriculum reforms are necessary with regard to increasing time allocation for the subject, ensuring that Physical Education teachers are trained comprehensively, and specific and detailed assessment prescriptions in curriculum documents provided. A national programme that promotes physical activity among people of all ages in BRICS countries, is also a strong recommendation.

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