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## Health & PE can be a game changer in schools

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'A healthy body and a healthy mind go together' is a clichéd statement. From ancient times this basic wisdom has been instilled in civilizations across the world, and given how fundamental this principle is to leading a healthy life, it is enshrined in all material from time immemorial which advocate living well.

Given this consensus across geographies and cultures, it was a natural way of life for everyone, children and adults, to be physically and mentally active; thus even when civilizations built cities and allowed for some sort of sedentary lifestyles for many citizens, it was not just the pursuit of intelligence-based activities that citizens were encouraged to do, but also physical activities. Due to the deeply ingrained wisdom of the importance of being physically active, most cultures built in and promoted a variety of physical activities for everyone, usually in honor of their Gods as documented by the Romans and Greeks; for example the Olympics itself was in celebration of and for Zeus or the invention of gladiatorial fights to thank the Roman Gods. It also did help that traditional non-mechanized lifestyles were such that one did not have to think too hard to be physically active – a homemaker had more than enough physical activity to be engaged in – from fetching water to pounding cereals and similarly, a farmer has a good share of physical activity unlike farmers in the modern world – though on both these aspects, we in India continue to see a lot of physical activity unlike parts of the developed world into which we are quickly transiting; e.g. there are mixer grinders in almost every urban household and tractors on most farmlands.

Traditional lifestyles encouraged physical activity across the society; for example even a hermit living in the forest had enough physical activity by just carrying out his daily tasks, on the other hand, those who spent a lot of time at writing desks elaborating the scriptures with the luxury of interns and assistants to carry out their daily tasks, there was the regimen of prescribed exercises such as yoga; though yoga is a contribution of the Indian civilization to the modern world, ancient cultures around the world had exercise regimens of similar kinds (tai-chi is an example; a martial art regimen with slow meditative movements).



If this was the case for adults being physically active in the pre-modern times, the children did not have it very different; childhood spanned across a small period of time in the ancient and medieval times, and they quickly joined the adults in supporting their respective livelihood activities. And even as children, most games they were engaged in had a fair amount of physical activity, be it hop-scotch or wrestling. The advent of the modern age changed this dramatically, characterized by industrialization, it changed lifestyles and cultures by rapidly transforming societies from being agrarian for thousands of years to becoming industrial. Large number of people started congregating in cities; initially it was mainly men and later with their families including children. The need for formal spaces for children arose and gave rise to mass schooling. However, the objective of these schools was narrow and limited across most societies which were in the process of industrialization. Children were to be kept safely till parents returned, were to be taught 'civil' behaviour and some basic skill sets which included literacy and numeracy. Physical education or children's health and overall wellbeing was not part of the objective.

However, by the beginning of the 19th Century, the idea of overall wellbeing and the importance of health gained currency across most societies which had established formal school systems. This changed stance gave rise to gyms within schools and encouragement of sports thereby bringing discussions around physical health and education into the realm of formal school education. However, the approach continued to be piecemeal. Sport, for instance, was not given the importance it deserved even in sport loving countries. Ted Murray, the legendary tennis coach who has lived and worked in many countries, in a decade old article states that in the U.S. sports and physical activity became a casualty due to a programme such as 'no child left behind' which focused too much on standardized scores and learning outcomes; he adds that even in sport loving countries such as Australia and New Zealand, the benefits of all students being involved in sports were not recognized adequately. In fact, he says, most physical activity happened outside school even in a country like New Zealand and within school, sporting activities were promoted only among students who were good at it thereby leading to insecurities among many students who experienced their first failure and disappointment in the sports fields or gyms.

### HPE gains currency

Over the years, research became more specific on the minimum amount of physical activity required to keep a young human body healthy along with the nutritional requirements at different ages. Health began to get attention through various means such as regular health checks, Body Mass Index (BMI) measurements, in-school meal programs and compulsory physical education (PE). PE classes became part of the school time-table for all grades and PE instructors were hired as part of the school staff. However, it always remained a separate aspect and not part of the academic program and hence was accorded a secondary status; the first casualty, whenever extra time was required for academics or when exams were at hand, was PE. This clearly indicates the perspective around which PE was in the curriculum – it was good to have, as long as academic activities were done first. It was compulsory for students, but not mandatory for schools. Soon, there was a decline of even this level of focus on PE from the middle of the 20<sup>th</sup> Century; with extra subjects and specific skill sets required for the 21<sup>st</sup> Century knowledge societies, PE was sidelined in many countries, particularly the developing ones.

As in the US example above, in other societies too, the over emphasis on academic excellence and grades/marks added to the imbalance. Lifestyle diseases such as diabetes and obesity became the norm by late 20<sup>th</sup> Century and as always, with the epidemic of a sedentary desk and computer screen-based life style taking its toll, humans began to realize the value in the ancient wisdom – 'health is wealth', more so for children! Things have begun to improve with the realization that a body that is not healthy does not allow the development of a healthy mind and if the overall objective is the holistic development of an individual there can be no compromises on PE. To add to this realization, researches have shown positive correlation of physical activity on various educational parameters, including learning outcomes.

The World Health Organization (WHO) came out with a recommendation that children should have 60 minutes of physical activity at least three times a week and based on this, many countries across the world have passed laws that make PE mandatory. WHO has revised these

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Exercise means run and play for sixty minutes everyday

guidelines and currently suggests 60 minutes daily for children between 5 to 17 years of age and most recently it has enhanced the physical activity requirement in children to greater levels – even suggesting that infants below one have at least an hour's activity daily and that goes up to three hours with one hour of moderate to vigorous movements for children between three and four years old. However, PE has continued to play second fiddle in most schooling systems and has not been fully integrated into the curriculum. Additionally, health and PE (HPE) which should have gone together are seen as separate aspects to be dealt with in specific sessions. In this article, the aspect of an integrated curriculum will be discussed using the Indian example.

#### HPE in India: A brief background

In India, NCERT introduced the HPE syllabus last year, once again reiterating that HPE is mandatory across all grades. The rest of this article will articulate why this can be a game changer, if done in the right manner. It is easier said than done, but by adopting the NCERT recommended approach wholeheartedly by not just the CBSE, but all Boards in the country, we could be taking the first big step towards creating a truly integrated and holistic education system for the country.

NCERT has released a 50 pager, titled 'Syllabus on Health and Physical Education (Classes 1-X)'. The document states that the idea of a comprehensive school health programme was conceived as early as 1940 and included six major components viz. medical care, hygienic school environment, and school lunch, health, yoga and physical education. It is a reference to the framework for school health services that was put forward in a report for India's post-war (WW-II) educational development; this was issued by the Central Advisory Board in 1944 recommending that school health services should be under the administrative control of the education department. Subsequently, the Bhole committee which was set up at the time of India's independence provided a blueprint for health services development in India in which there was substantial focus on what should be done at the school level – which even NCF 2005 considers as one of the most comprehensive documents on school health services that is relevant even in the 21<sup>st</sup> Century. The report identifies school health services to encompass (a) both, preventive and curative health measures which includes treatments of diseases and hygienic environment; (b) creating a positive health culture by promoting physical activities such as sports, providing for supplementary food and by giving health education to all students through formal instruction as well as adopting good practices.

Last year's NCERT report reflects the arguments made in the NCF 2005 position paper on HPE and states that the implementation of this comprehensive approach has failed due to which we currently have a situation wherein the subject of HPE continues to be dealt with separately in a non-integrated manner across the school system in our country. And the document once again reiterates the inter-disciplinary nature of HPE and the cross cutting themes across subjects and identifies the need for cross-curricular planning. This is at the crux of the matter. Earlier initiatives have failed to make HPE part of a comprehensive education model because it has never been viewed as inter-disciplinary, but as something important and mandatory thereby brought into the curriculum in a segregated manner.

#### HPE in NCF '05 and the new NCERT syllabus

The rest of this article focusses on how this integration across disciplines can happen and what kind of cross-curricular planning is required; this is done by understanding the HPE syllabus put forth by NCERT and studying some of the examples presented in the CBSE document on mainstreaming HPE. It is important in this context to take note of what the NCF position paper has put forth on HPE and the revision that NCERT's latest syllabus on HPE makes. Other than stating the overall objective of developing the right attitude among students about individual and societal health and one's physical well-being by providing them theoretical and practical knowledge of health, disease and physical fitness, the NCF position paper also speaks of four major themes that any HPE program should cover: (a) personal health, physical and social development; (b) movement concepts and motor skills; (c) relationships with significant others; and (d) healthy communities and environment. The NCERT syllabus puts forth the following six themes: (i) We and our environment, (ii) Human Body; physical fitness and health, (iii) Food and Nutrition, (iv) Social Health and relationships with others, (v) Safety and Security and (vi) Consumer Health; vocational and leadership aspects.

A glance at the HPE themes put forth by these two documents shows that they are overlapping themes. The syllabus presented by NCERT is a meaningful order of the themes, questions, key concepts, resources and activities; and the document details out the spiralling manner in which each of these themes and sub-themes are addressed across grades I to X. To understand how this is done let us take one of the themes and identify the manner in which it has been addressed.

Due to the paucity of space, we will look at how the selected theme is dealt with at different levels of schooling rather than at each grade. Let us look at the theme related to 'physical fitness and health' as most of the other themes have some connect to the other subjects in the curriculum and thereby relatively easier to make cross-disciplinary connections. In fact it is the physical fitness related aspect that usually gets separated as well as given the least importance for reasons discussed earlier.

Physical fitness and health is presented under the theme 'movement awareness' at the primary level and the sub-themes under it include body movements and the role of different body parts, different forms of movements, the extreme possibilities of our bodies, neuro-muscular and other coordinative abilities, combative skills, body strength, importance of exercises, rhythm and reflexes, speed and power, coupling motor ability as well as some basic connection to sports. In higher primary, the focus is on 'sports skills abilities and physical fitness' and the sub-themes are bodily co-ordination and flexibility; yoga, local games, self-defence related activities, track and field events, the components of fitness, the concept of a leader and followers and the principles of sportsmanship and sports for recreation versus competition.

Grades IX and X have a deeper orientation into physical and sports education and cover a variety of aspects such as measuring progress, aiming for excellence, fatigue and injuries in sports, training and load and adaptation of body and very importantly the concept of ethics in sports. Knowledge and proficiency of various sports is another sub-theme at the secondary level where students are expected to make the correlation between motor skills and the sports along with identifying the historical evolution of sports and studying biographies of relevant sporting personalities.

The above framework provides educationists many ideas on what can be done to integrate the theme into the regular curriculum. A host of activities can be thought of to bring in the practical aspect along with aiding the development of theoretical understanding of these aspects. Many of the themes connected to the human body and the science behind the various movements are a direct link to topics in EVS at the primary level such as body strength, role for different parts of the body, reflexes and so on. Sub-themes such as speed and power can also be part of introducing mathematical calculations by bringing different sports examples such as the speed of the athlete, the height of the jump, the force of the throw, etc. Given the natural interest of children in games, particularly of the local kind, local history and culture can also be introduced along with bringing in various words that are used in the local games to enhance the development of languages and overall the communication skills.

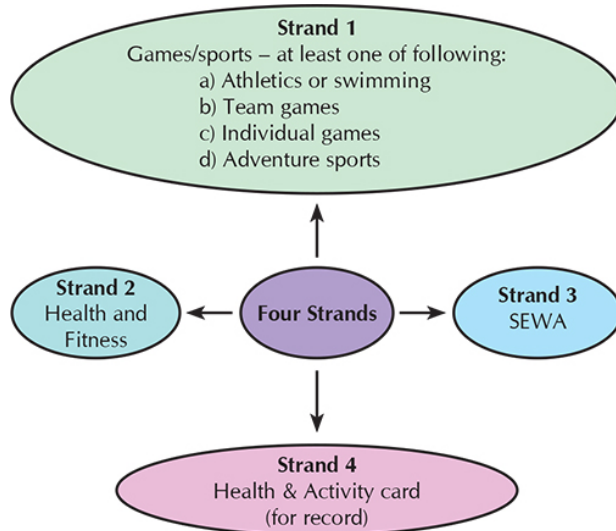
At the higher primary level, themes take a natural place under various subjects from the pure sciences to history; math to languages. For example, the idea of sportsmanship and other rules of the games provide ample opportunities to introduce various concepts of interdependence, democratic principles and civil behaviour that are part of the social sciences. The reality of competition and at the same time the need to balance it with fair play are other socio-psycho aspects that can be brought into discussions in topics under civics or any

other social science subject. The emergence of different kinds of sports and games across the world is a natural link to concepts related to geography.

Similarly, at the secondary level the themes related to training for competitive sports, sports injuries, body work overload connects to a variety of biological aspects related to the human body; it relates to the need for careful attention to what we put our body through and the potential as well as the limits it can endure. The deep study of the history behind various sports and reading of biographies are intricately linked to history thereby making the subject interesting as well as relevant to students who otherwise may consider the topics in history redundant and thereby lose out on gaining the skill sets that a study of history gives to its students. The focus on rules and other technical aspects of the various sports provide opportunities to introduce mathematical theories which otherwise are dealt with in an abstract manner. In this way themes under HPE can be integrated into the regular curriculum by using the subjects that already exist.

#### Mainstreaming HPE: The CBSE approach

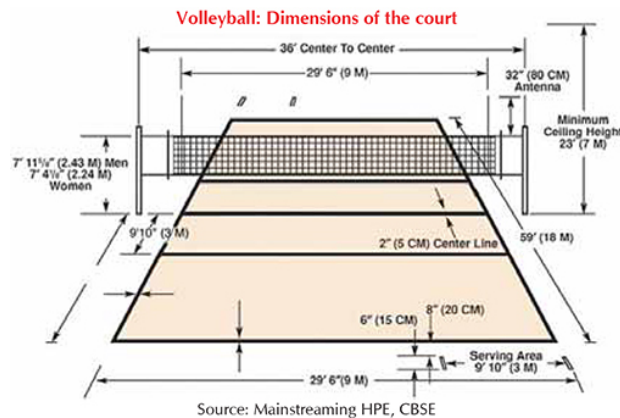
With the intention of helping schools mainstream HPE, CBSE has brought out a 100-page document on the topic. The document is a handbook on what can be done to integrate HPE related aspects with the curriculum; it provides examples with all possible details. In order to simplify the complex cross-linkages that exist in HPE, both within HPE as well as its connection to other subjects, and to help draw up an assessment framework given the mandatory clause that has been introduced, the document categorizes HPE into four strands and addresses each of these strands in detail.



Source: Mainstreaming HPE, CBSE

The technical aspects of the various games have been presented in this document along with technical specifications such as optimum air pressure in the different balls used for different sports; for example for a football, the pressure of air must be between 600 to 1100 g/cm<sup>2</sup> whereas for a basketball it is 3170 to 4000 g/cm<sup>2</sup>. The document also goes on to provide for each of the above strands, and the games and sports in them, a detailed card that captures the history of the game, the applicable rules, basic requirements and a set of assessment tasks.

Illustration such as the one below which provides the dimensions and other measurements and requirements for a volleyball court is presented for most games and sports.



These ought to be integrated into math and not remain as general knowledge factual questions. This is the challenge to mainstream HPE. Though the document referred to herein has rich details about HPE and its various aspects including many a games and sports, it will not be possible to mainstream HPE with this document alone. There has to be an effort to do so which would require the coming together of various stakeholders – to make HPE integrate holistically and truly, the PE teacher and subject teachers need to come together and discuss what among the HPE themes is going to be dealt with in which topic and the kind of practical exposure that will help in this regard. This curricular planning has to be done in a comprehensive manner involving all the teachers in the school and hence the presence of the head of the institution is also required. For some of the examples put forth earlier, it is also important that appropriate materials are developed – in fact the teaching learning material developed for this purpose should not be a supplement for the textbook, instead the material must have HPE as the core and be at the heart of the matter and the texts should play the role of secondary material.

In conclusion, one can say that a number of steps have been taken in order to give HPE its due and currently crucial action lies at the doorstep of every school. With the changes in the curriculum and the policy of reiterating the importance of HPE and emphasizing its mandatory feature, the necessary ground work has been put in place.

Going forward, to go through in detail the various material related to HPE, such as the NCERT syllabus and the CBSE document on mainstreaming HPE, is a foundational step for every teacher in every school. The school leadership and management should recognize the need to make HPE implementation more robust; and in order to implement the same, teachers should be allowed certain flexibility to rejig

the schedule to suit the requirement. It requires a complete re-think in the way the curriculum is to be delivered. For HPE to be integrated truly, the syllabus ought to undergo a change and teaching-learning material has to be thought through afresh and the critical success factor lies in providing teachers, the autonomy.

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 Classroom Connect, May-June 2019

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