UNIVERSITY GRANTS COMMISSION

Physical Education Code: 47

Unit–V

Professional Preparation of Physical Education

Syllabus

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Sub Unit – I

Development of teacher education for physical education in India. Comparative study of professional preparation in physical education of India with those of USA, Russia, Germany, Australia and UK.

5.1.1 Development of teacher education for physical education in India.

In India physical education emphasized physical development, good health and character for development of the individual, as well as the defense of the country. The Indian National Congress established in 1885, recognized the role of physical education in the freedom movement of the country. This political consciousness led to the establishment of Vyayam Shala, Akhadas and Talim Khanas. Some were already in existence, but many more were founded by political people with the aim of national regeneration through physical education. These centers of physical education provided opportunities to the young and the old to take part in indigenous physical exercises. This revival of traditional form of physical training encouraged a sense of national unity and a desire for political freedom. More and more people took part in these exercises for self defense. This resulted in Akhada movement in India. During this movement in the early part of the 20th Century, the exercises were carried out in Vyayama Shalas, Talim Khanas and Akhadas. These institutions tried their best to maintain and promote the traditional activities among the youth of the country and inculcated amongst them love for physical fitness, nationalism and patriotism. However, under the British rule no systematic efforts could be made to promote physical education to achieve these ideals. The first step in this direction was taken in 1937 when the Congress Ministry came to office in the Bombay State. The history of physical education can be studied along with classification of various periods of Indian political history which is divided into the following ages.

1) Vedic Age - {2000 B.C. - 1000 B.C)
2) Epic Age - (1000 B.C - 600 B.C)
3) Historical Age - (600 B.C - 300 A.D)
4) Nalandian Period - (300A.D)
5) Rajput Period - (300 A.D to 1200 A.D)
6) Muslim Period - (1200 A.D - 1750 A.D) 7) British Period - (1750 A.D - 1947 A.D)
8) Post Independence Period - (1947 upwards)

1) VEDIC AGE

Much of the description about Aryans who migrated to India from Central Asia comes from the Vedas. The Vedas are not only the religions books, but they also contain references to the social and political life of the people. Inhabitants of India during this period were strong and sturdy. They generally loved pastoral and agricultural life. Archery, horse riding and chariot racing were their common sports. In fact, these sports were not meant for pleasure only, they were devices of war as we

1 1 . Yoga seems to have originated during this period. 'Pranayama was considered a sacred duty. 'Pranayama' is a yogic exercise practiced by the sages of the time to have complete control of the breathing process so as to fortify the body and purify the soul. Some of the physical exercises were 'Surya Namaskar' which helped keeping the body healthy.

2) EPIC AGE

The exploits of the Indians of this period can be gathered from the 'Ramayana' and the 'Mahabharata', which were composed during this period. Both epics reveal that this period was a period of great turmoil and wars. On the other hand the system of education was quite elaborate. This system had apart from scriptural studies, physical education as one of the compulsory items. Archery, Javelin throwing, sword fighting, club fighting, wrestling, horse riding and chariot racing have been elaborately described in these books. The names of such warriors as Ram, Laxman, Ravan, Megghanatha, Bhima, Arjuna, K a m a , Bhisma, Drona etc. have become immortal for their valour. There were no separate teachers for physical education; but the knowledge of arms and armaments was given by the same teachers who were well versed in scriptural studies too. There used to be Gurukhuls (Schools) where pupils lived a celebrate life upto the age of 25 years and learnt all physical activities along with mental education.

3) HISTORICAL AGE (100 B.C);

The ancient religion of the Hindus had its first jolt in this period. There was a great revolt against the existing social disparities, rigid caste system, the Brahamanical dominance and orthodox acceptance of the scriptural authority. There was general discontent among the masses against the tyrannical dominance of the priestly class. This spiritual awakening gave birth to two great religions namely 'Jainism' and 'Rudhism'. These religions were religions of peace and non-violence. Yet due emphasis was also given to physical training. Meghasthenes who visited India during the period of Chandragupta Mourya has referred to a very elaborate system of physical training for the army. Wrestling, sword fighting, Javelin throwing, horse racing etc. were very common sports in those days. Training in the art of war was both intensive and extensive.

4) NALANDA PERIOD;

Nalanda was a great city learning where more than 6000 students, not only from different parts of the country, but also from foreign lands used to study. Along with religious philosophical studies, physical education was given due emphasis and was taught to students in a systematic manner. Besides 'Pranayam' and 'Suryanamaskar' other forms of physical exercises were done every day without exception all the year round. The life of students used to be very hard during this period.

5) RAJPUT PERIOD:

There was revival of Hinduism during this period. The Rajputs were divided into hundreds of clans and often fought among themselves. There was no central authority; however they remained supreme up to 13th century. The Rajputs called themselves pure Kshatriya and their profession by birth was fighting. That's why during t heir was day, they had adopted a wonderful system of physical-cum-military training. From the early age the Rajput children were taught how to use swords and daggers effectively. Horse riding, Javelin throwing, archery, wrestling, hunting and mace fighting etc. were very popular activities. Girls were also taught how to ride a horse without saddle. Dancing and music have been part and parcel of ‘the Rajput life. The religious fairs were good examples of this activity.

6) MUSLIM PERIOD:

This period was also marked by much strife in which both the Hindus and Muslims took part for supremacy of the one over the other. Many traditional activities like 'Yogo' and 'Pranayam' were given a setback. Hunting seems to be very popular sports of this period. Sports like wrestling, boxing, swimming, sword fighting and Javelin throwing were given due emphasis. Pigeon flying and animal fighting were also very popular during the period,

7) BRITISH PERIOD:

Physical education had always existed in the Indian society in one form or other, but had never been considered as a part and parcel of school curriculum. No doubt the English are a sports loving people, yet they also did not pay any attention to the inclusion of physical education in the school educational programme. Tn 1833, Government of India shouldered the responsibility of education and in 1870, education was made state subject, the centre only retained the supervisory powers. For the first time, the Indian Education Commission in' 1882 recommended physical training in school education. It recommended that physical training be promoted in schools in the interest of the youth by encouragement of native games, gymnastics, drills and other exercises. This spurred the interest of the school children to take physical activities. In 1894, the question of making it a compulsory subject in schools was considered but no definite policy came out of this. Western games such a Polo, Cricket and Hockey were becoming popular. Private organizations for physical education like gymnasia, Vyayam Shala, Akhadas and Kreeda mandals contributed much for the spread of traditional interest in the matter. Dandas, Baithakas, Yogic exercises, folk dances, wrestling and exercises with light apparatus received greater attention. Indigenous games like KhoKho and Atye – patye also became popular. Physical education such as drills and P.T. exercises were imparted in some schools by ex-serviceman re-employed by school authorities. They also prepared the students as Scouts for school ceremonies. The outstanding development of scientific physical education in pre-independent India goes to the Y.M.C.A. College of Physical Education, Madras founded in 1920 by Mr. H.C. Buck. In 1931, the Govt. College of Physical Education, Hyderabad and in 1932. The Christian College of Physical Education Lucknow, were established. In 1938, The Training Institute of Physical Education, Khandiyali (BombaY) came into existence. In 1914, 'Vyayam Prasarak Mandal' Amaravati, was set up to serve the cause of Physical Education in India. In 1924, this institution started a five weeks summer course for young men 1 , A yoga completing course was awarded the title of Upanishad'. Here, in 1945, the National Association of Physical Education and Recreation of India were formed.

PHYSICAL EDUCATION PRIOR TO 1882

The primary object ’ of the schools that were established before the creation of the Department of Public Instructions, Bombay was the development of mind by teaching facts without least attention to the development of the body. During this period, physical education of the students was totally neglected. Things began to change a little better after the creation of the aforesaid department. Some institutions began to take some steps for providing physical education in their institutions. For example, the Elphinstone College, Bombay established a cricket club in 1862 to 1863, The Poona College had a Mull Khomb and a Gynastic Trainer in its staff in 1867. By 1881, this Poona College had clubs for boating, cricket and tennis and the Government schools gynastics were provided and Indian games were introduced. However, it may be said that physical education was comparatively neglected in private schools and colleges of this period. Miss Corpenter, the well known social worker of England, paid a visit to Bombay in the sixties of the last century. She drew the attention of the government of Bombay to the urgent need of providing physical education in government schools. The subject thus received its first consideration as a matter of policy after 1866. One of the results of her suggestion was the introduction of physical education in the training colleges for men. In all these institutions gymnastics and drills were i n t r o d u c e d as a p a r t of the school routine. It is not possible, however, to know-the extent and manner in which physical education was introduced in primary schools as a result of this training. But here also, as in the secondary schools, the result of this training. But here also, as in the secondary schools, the result must have depended mostly on the personal interest of the teacher. The second result of her suggestion was the introduction of a clause in the revised grant - in - aid code which permitted sanction of building

grants for gymnasium. The third result of her suggestion was to draw the attention of departmental officers to the problem of physical education. The Inspectors were now required to submit a special report on physical education and these were annually published as an appendix to the Directors Report with effect from 1879-80.

b) PHYSICAL EDUCATION BETWEEN 1881 and 1912:

The Indian Education Commission recommended that physical developments be encouraged by promotion of native games, gymnastics, school drills and other exercises suited to individual school. This recommendation was accepted by the government, as a result of which physical education began to receive much greater attention than before. This trend was further strengthened by the call of the universities and public leaders to give more attention to physical education. Between 1882 and 1892, the Bombay Government took a number of measures for the development of physical education. The Central Sir Dinsha Manikji Palit Gymnasium in Bombay was given a building grant as well as a recurring grant to its staff on condition that it trained competent teachers of gymnastics. This may be described as the first training scheme organized for the teachers of physical education in Bombay state. Besides, Bombay Government granted land for play grounds to schools wherever government land was available. All the government high schools were provided with gymnasia and play ground. Equipments for physical education were supplied to primary schools. Inspectors were instructed to pay particular attention to physical education, school gymkhanas became a more regular feature of secondary schools. As yet no regular grant was available, but special grant for physical education was given for purchase of apparatus. Early in 1894, it was suggested to Bombay Government that in colleges and schools, attendance at the gymnasium should be made compulsory. No students would be permitted to appear at any higher examination of the university unless he produced a certificate of attendance in the gymnasium or play grounds from the Principal of his institution. The aforesaid suggestion was circulated among the principals of colleges and high schools, but the response was not favorable. After careful consideration the Government felt that there was no need for insisting on compulsory attendance in physical training classes. The reports of Director of Public Instructions showed that there was a distinct voluntary inclination towards physical exercises and that was a better way of promoting physical education than by making it compulsory. The government decided to watch with interest the progress of the voluntary movement, and if it continued at the present rate, the necessity for compulsion would not arise. It is an idle speculation to imagine what might have happened if physical education had been made compulsory in 1894-1895 as suggested by the Bombay Government. But it appears that a good opportunity was lost for no apparent reasons. During the next 18 years, physical education continued to plod on along the general lines as indicated earlier during the early British period and thereafter. A gradual feeling began to develop that the policy laid down in 1894-95 had become absolute and that the time to give a new lead had at last arrived.

PHYSICAL EDUCATION BETWEEN 1912-1937

During the first decade of the twentieth century, physical education based on Swedish gymnastics, games and sports was introduced as a part of the educational curriculum in Britain. The British educational authorities in India took similar steps in European schools and also schools meant for nobility. The missionary schools also followed suit. For example, in 1903, the St. Joseph's High School at Biliary in South India used the after school hours for physical training exercises for all students. The government of India itself was aware of its own responsibility to help lay the foundation of a sound system of education all over the country. So in 1912 the education department of government of India sanctioned a non-recurring grant of 25 lakhs for distribution in all provinces for school hygiene and acquire of play grounds. This encouraged organized games in the country as a part of educational programme. In 1908,

Dr. J. Henry established the first 'Young man's Christian Association (Y.M.C.A) in India at Calcutta. Soon many other Y.M.C.A. Associations came into existence in the country. With the advent of Y.M.C.A, The Indian Physical education programme changed from Swadeshi gymnastics and military drills to one of individual and team sports and recreation activities. In addition to English sports of field hockey, rugby, football, track and fiej-d atheletics was given due encouragement. The Y.M.C.A. approach to calisthenics and drills was quite different from that of the retired military instructors of the previous years. The play ground movement was initiated and recreation systems were established in big cities and towns. Out of the grant of Rs.25 lakhs, the Y.M.C.A. in India also received a substantial subsidy to meet the salaries of the physical director, whose services were also utilized by the Education Department of Government of India. Mr. P.C. Wren was the first physical director of the Y.M.C.A in India. Under his leadership a class was held in 1913 in Poona by the Education Department to train teachers to teach simple physical training exercises and games in their respective schools. A hand book for the guidance of these teachers was also published. This grant enabled all the European schools in Madras to create a post of physical director and to give further impetus to organized games in such schools. The drive for educational reforms started by Lord Curzon in the early years of the twentieth century was reflected in the field of physical education also. Plans for the training of teachers of physical education and the organization of physical, activities on modern lines were prepared and put into effect in 1913. In the same year, Mr. Wren was placed on special duty to train teachers. As a result of his initiative, the drill system devised by him was adopted in almost all government schools. It was soon reported that the system was serving its purpose very well and the exercises served as an excellent means of relaxation. But mainly owing to the small number of trained teachers, the work of Mr. Wren did not have any lasting impact in the growth of physical education. After the end of the First World War in 1918 there was general awakening in all sections of Indian society. Education was looked at from national point of view for the first time. The national awakening of the Indian people and the growth of Vyamashalas, Akhadas and Talim Khanas has been dealt with in earlier pages. An organized programme of physical activities based on children's activities was regarded .an essential for good education. A great need was now felt for trained physical teachers. To fulfill this demand the Y.M.C.A. at Madras took the lead and established the National Y.M.C.A. school of Physical Education in India in 1920. The school functioned well under the devoted principal Mr. M.C. Buck. In 1931-32 this school became known as the Y.M.C.A. College of Physical Education and gained international reputation. Since 194D the institution became co-educational and offered three types of courses Diploma, Government Certificate High Grade and Government Certificate Lower Grade. Thousands of young men and women had been trained as teachers of physical education since then. By the end of 1920, the well organized government schools had a good lay-out for physical education. Outdoor games received a good deal of encouragement and became popular. Private sports clubs were formed at important centers in main cities. By this time, the importance of physical education as a part of education curriculum received recognition from the higher education authorities. Drill masters were employed in schools. They conducted all physical activities with enthusiasm. But their educational qualification was too low and hence much different from other members of the school staff and this tended to set them apart. Government, therefore, decided to make a more permanent arrangement for training teachers for physical education. For this purpose, a special post of the Director of, Physical Education was creating in 1925, and Mr. Fred Weber of the Y.M.C.A, Bombay was appointed to it. He conducted courses of physical training and mass drill in several cities of the province. The system advocated by him was taken up in government secondary schools and given considerable publicity. The government college of physical education was established at Hyderabad, Deccan in 1931, with Mr. Weber as Principal. Physical education was made compulsory in all the primary, middle

and high schools of the former state of Hyderabad. He remained principal of the college till 1945, In 1952, the college was put under private control and was known as the Academy of Physical ePlducation. It then reverted to government control. Its course lasts one academic year. At the end of the course, graduates were awarded 'Diploma' and non-graduates certificates. Mr. Wren, Mr. Weber and others could not succeed in making any lasting impression on physical education in schools. This was so because they had no training institutions to work through. Further the continuity of their work was broken by the untimely retrenchment of Mr. Waren in 1929. In 1930 Mr. James Buchan, Physical Director of the Y.M.C.A. Calcutta called a meeting of citizens for the organization of youth welfare councils on provincial basis. The object of the councils was to promote the health of the Indian youth through extension of health services and instructions in schools. It aimed to provide qualified teachers of physical education by establishing a college of physical education in each province. His plan proved to be major success in the development of physical education both before and after independence of India. In 1932, the Government of Bengal established the Government College of Physical Education at Calcutta. Mr. James Buchanan was appointed as principal. His intensive training of teachers was so highly regarded that there was a great demand for 'Buchanan trained' teachers of physical education. In 1956, the college became coeducational. In 1932, The Christian College of Physical Education was established at Lucknow under private missionary management. Dr. Arthur W. Howard was appointed principal. The college was a unit of Lucknow Christian College and was under the control of its Board of Governors. The College was recognized by the Department of Public Instructions, Uttar Pradesh. The course lasted for one academic year, admitting graduates to the diploma course and under graduates to the certificate course. An experiment in physical education undertaken by the Bombay University during the period deserves special mention. The physical education committee (1927) writes that the Principals of three Art Colleges at Poona (Rawbinson, Kanitkar and Shah) have for more than one year successfully carried out a scheme of compulsory physical training of students of the colleges. The scheme created treat enthusiasm among the students and has worked very successfully for over three college terms. The interesting part of this experiment is that games, drills and gymnastics have been coordinated and a touch of military training has been given with a view to create interest. The Government was not able to take adequate measures for development of physical education during this period. The inadequacy, however, was made up to some extent by non-official efforts. These were the days when the movement for National Education was at its height and physical Education found a prominent place in it. The task of creating public interest in this matter and of training specialized teachers of physical education was undertaken. A large number of teachers trained by three H.V.P. Mandal, Amaravati, worked in the schools of this state particularly of Vidarbha. These institutions did a lot in popularizing physical education among the people and in promoting the cause of indigenous games and exercises. It was mainly owing to the efforts of these institutions that physical education made a little progress during this period. Prior to 1937, physical education was generally regarded as being confined to 'school drill' which was entirely optional in character and frequently loaded down upon even by the pupils. To be delicate in health and 'strong' in mind was a matter of pride in those days. Since 1937, physical education has been regarded as a part of general education and made compulsory for all school children in Bombay, The first syllabus for physical education was introduced in 1928. In the light of experience gained, the syllabus from class I to IV, V to VIII, and XI was revised from time to time. The Government also introduced a scheme for medical inspection of school children on compulsory basis. Every student was required to undergo medical examination at least thrice during his school life.

ROLL OF CENTRAL ADVISORY BOARD OF EDUCATION IN THE DEVELOPMENT OF PHYSICAL EDUCATION.

The Central Advisory Board of Education was established in 1935 by the Government of India. The Board adopted a specific resolution at its twelve Meeting in 1946, where in item XVIII of the proceedings given special importance by mentioning the note that the Board then proceeded to consider the question of making physical education an examination subject in High Schools. While the Board were in sympathy with the objectives of the proposal that schools should take all possible care for promotion of physical welfare of children in their care, they were unable to accept the view that 'physical fitness' could be included as an examination subject. Apart from practical difficulties, the Board felt that their, object of physical education would be defeated if the suggestion was accepted. Further, the Board of opinion that establishment of an expert committee on physical education would not serve any useful purpose. The Board in the first instance would like to see what provisions have been made in regard to the health of the school child in the first five year programme of educational development.

Board's fifteenth meeting (1949):

Physical training became a compulsory subject from this year and the council of .physical culture is steadily widening its sphere of influence, through money grants and technical advice over the general population both in urban and rural areas. In this meeting the Board took note of the interim report of the committee for physical education and suggested that in preparing its final report, the committee should keep the following points in mind:- (a) In allocation of expenditure between central and provincial governments for the implementation of the programme of physical education, the contribution of the centre should be 50 percent and not 90 percent, (b) The cooperation of the Ministry of Defense should be secured for furthering the development of physical education in the country and full benefit be taken of the physical training schools at Poona and other centers by the said ministry.

BOARDS NINETEEN MEETING (1952):

The Board in its Nineteenth Meeting considered the report of its committee on the promotion of youth movement in India. It emphasized the need for opening annual training camps to train scouts leaders including guides. It also stressed the need for starting Olympic organizations for promotion of athletic activities. The Board also recommended the opening of youth hostels and providing travel and other facilities for students and advised that special attention should be paid to the needs of children leaving schools at the age of 12. Further suitable organizations should be set up for their educational and other needs.

B A O R D ’S TWENTEETH MEETING (1953):

The Board in its twentieth meeting further recommended that the state government should promote hobbies and establish scout and guide organizations and stressed the importance of athletics and N.C.C. in the schools.

BOARD'S TWENTY FIRST MEETING (1954):

The Board in its twenty first meeting considered a note on students indiscipline prepared by the secretary, Ministry of Education. It recommended that the Central government should give loans on easy terms to state governments for improving’ facilities like school and college hostels and play grounds. The state governments should similarly float loans for the purpose and students in secondary schools and colleges should be given greater opportunities for participating in such co-curricular activities as the N.C.C., scouting and guiding and other social services.

POST INDEPENDENCE ERA:

India regained her freedom in 1947, This necessitated the formulation of new educational policy to build up a new nation. The subject of education was entrusted to the states and the centre retained the affairs of co-ordination and formulation of national policy on education keeping in view national objectives. A large number of schools were established in the country. Education was made free and compulsory up to the age of i 14 years. Hundreds of new colleges and universities came into existence to forester to the needs of the country. Through physical education was considered part and parcel of school education, the drive was still not sufficiently vigorous. No doubt, a considerable number of in situations for training teachers for physical education had come up after independence but the administrative machinery remained almost the same. A number of new schemes were put in to operation to boost up the standards of sports. The Ministry of Education, Government of India set up (i) Central Advisory Board of Physical Education and Recreation in 1950 (ii) All India Council of sports in 1954. The purpose of these bodies was to suggest ways and means to further the cause of physical education and sports in the country.

NATIONAL PHYSICAL EFFICIENCY DRIVE: The introduction of the National Physical Efficiency Drive strengthening the colleges- of physical education in the country and encouraging the states sports councils and other agencies to develop play fields, stadia and swimming pools were some of the important steps taken by the Government for promotion of sports and physical education. It was launched by the Ministry of Education in 1959-60. The plan consisted of certain items of physical efficiency tests which prescribed standards for achievements. It was hoped that it would arouse interest in men and women to improve their performances and thus stimulate their keenness for physical fitness.

NETAJI SUBHASH NATIONAL INSTITDTE FOR SPORTS On the recommendation o f the Ad-hoc enquiry committee of 1958, the Netaji Subhash Institute of Sports was established by the Government of India at Patiala. The main objectives were:- i) Producing coaches of high caliber in various games ii) Rendering assistance to sports bodies in talent hunt and training of up-coming athletes through its Regional Coaching Centers. iii) Polishing the National Teams before their participation in International competitions. iv) Conducting re-orientation courses for physical education teachers. v) Carrying out Research in issues relating to sports. vi) Organizing seminars, conferences and tournaments in games and sports. vii) Helping Afro-Asian countries in the training of their personnel as coaches. viii) Awarding scholarship to students studying in secondary stage who are proficient in games and sports. ix) Functioning as the Secretariat of Asian Athletic Coaches Association, Indian Association of Sports Medicine and Indian Association of track and field coaches. x) Carrying out the rural sports programme of the Government of India.

NATIONAL DISCIPLINE SCHEME;

The National Discipline Scheme came into existence on July 24, 1954 at Lajpat Nagar, New Delhi. It was in 1965th at N.D.S. was merged with A.C.C. (Auxiliary Cadet Corps) on the recommendation of the Kunzuru Committee. Finally this scheme came to be known as National Fitness Corps (N .F .C). The aims and objectives of the scheme were (a) To make the youth healthy in mind and body and instill in them a sense of patriotism, self - reliance, tolerance and self - sacrifice, (b) To develop human values and to build in them a desire to serve the country and humanity at large. The programme of the scheme covered items such as physical training, administration, organization and cultural programmes.

NATIONAL CADED CORPS:

The N.C.C was introduced in the year 1948 by an act of the parliament. Since then i t has expanded throughout the country. The scheme was operated by the Ministry of Defense in co-operation with the state governments, through the Director General of N.C.C. I t consisted of three sections i.e . Senior, junior and girls. There was a Central Advisory Committee presided over by the Defense Minister to advise the government on all matters concerning the expansion of N.C.C and M.C.C The training was usually given in schools and colleges,

AUXULIARY CADED CORPS (A.C.C): The auxiliary ceded corps came in t o being in 1952 as a supplement to the Jr. Division of N.C.C. It ' s motto was service to the country. Both boys and girls with in age group of 13-16 were admitted to the corps. The train in g included P.T.& drill, team games, field craft, first aid, sanitation and hygiene. In addition to these home-nursing was taught to the girls as a special subject. The A.C.C. was merged with the programme of N.C.C. in 1965.

INDIAN OLYMPIC ASSOCIATION:

In 1927, the Indian Olympic Association came in to existence. Since then it has been functioning in India and is affiliated with the International Olympic Committee.

A) COMPULSORY PHYSICAL EDOCATION IN SCHOOLS:

In 1962, after the Indo-Chinese war, the government of India decided to give serious consideration to a scheme of compulsory physical education in schools. It was the policy of the government to rely on the strength of the army in all matters of defense. Rut the aforesaid experience showed that the second and third lines of defense must always be replenished by recruitment from the general public. For this a new integrated scheme of compulsory physical education was scheduled to be put into effect from July 1963. The planning commission made a provision for six cores and forty lakhs for the implementation o f the new scheme. The scheme covered all students from class VI to class XI. Five periods of not less than 45 minutes each were to be devoted to physical training. However, the scheme failed to come in to force in its true spirit.

DEVELOPMENT BY THE ONION GOVERNMENT IN TRE FIELD ALLIED TO PHYSICAL EDOCATION:

a) Construction of Stadium: The Ad hoc Enquiry Committee on Games and Sports (1958-59) appointed by the Government of India recommended that ' utility stadiums' should be built on 'shramadan' basis. This recommendation was expected to be followed where financial reasons might prevent a full sized stadium from being constructed. Under this scheme, financial assistance was to be extended to state government, states sports councils. Municipalities and District Boards for construction of stadium on a matching basis. Under the scheme, the first stadium was built at Patiala. b) Mountaineering: Mountaineering as a sports of adventure has been gaining much popularity. It deserved special mention after the outstanding success in 1065 by the Indian teams in conquering the summit of the world. The Himalayan Mountaineering Institute set up at Darjeeling was doing much useful work. The Union Government had set up a committee in 1965 to make recommendations about the development of the Eastern Himalayan Mountaineering Institute at Manali, c) Arjun and other Awards to sports persons: The Union Government instituted "Arjuna Awards" to honour sports-men and women for their outstanding performance in games and sports. These awards were instituted in 1961 and twenty sports men in different games were honored. Nine sports men received these awards in 1962, seven in 1963 and seven in 1964. The awards are given by the President of India in a special function. The "Arjuna Award" is the highest national honor for sports person in India. It is awarded on the recommendation of All India Sports Council. The

Government of India also decorated some sports personalities with the award of "Padma Shree" and "Padma Bhusan". d) Development of Vyayamasalas and Akhadase ' Scholarships for Higher Studies in Physical Education This scheme provided for award of four scholarships for specialization in some selected indigenous physical education activities. The value of the scholarship was Rs.200/- per month and was tenable for one year. Three candidates were selected for yoga, wrestling and folk dances by The Central Advisory Board of Physical Education and Recreation in 1960-61. Later this scheme was abolished along with the abolition of the Central Advisory Hoard of Physical Education and Recreation. THE NATIONAL POLICY ON EDDCATION (1967-68) : The National Policy on education announced by the Government of India in 1968 attached special importance on sports, games and other vigorous physical exercises and stated that the Games and sports should There should be great emphasis on the provision of playing fields and on the fullest use of stadiums by educational intuitions. Coaches should be provided in schools and colleges. Special efforts should be made to develop hockey, football, volleyball, wrestling and Indian games like Kabbadi or Kho-kho which cost little but provide for vigorous physical exercise. Hiking and mountaineering need special encouragement. N.C.E.R.T CURRICULUM IN PHYSICAL EDUCATION (1975): The Council prepared in 1975 a paper on "Approach to the curriculum for the 10 year school" in which physical education was considered as one of the seven compulsory subjects with the object of integrating it into the new pattern of education suggested by the Education Commission in 1966. This council also prepared in 1975 a draft curriculum in physical education for classes I to X. This curriculum covered a large number of optional subjects for the participants. The curriculum also emphasized inclusion of health education under the programme. Guide lines for teacher requirements, play ground, equipments and time allocation had also been included in the draft curriculum. This idea was to develop a workable programme of physical education. The draft also pointed out that the chief objectives of physical education were to provide recreation and enjoyment to all pupils. Another objective was to improve the national standards in sports and games.

NATIONAL SPORTS POLICY(1980): In 1980 the ' All India Council of Sports' framed a national sports policy which mainly dwelt on organizational aspect with emphasis on competitive sports. The idea was to provide coaching to sports so as to win laurels in international field. It recognized the right of every citizen to participate in games and sports and other recreational activities to make the nation strong and healthy. It also set the primary goal of making all Indian citizens alive to the need for regular physical exercises from early childhood to an advanced age. To achieve this, not only physical education was to be made compulsory curricular subject at all levels of education but also mass consciousness on physical education was to be aroused. Universal participation was to be ensured by providing easily available facilities. The Draft National Sports Policy outlined programmes for the improved functioning of the two Central Institutes in Sports and Physical Education, Gwalior and Patiala. THIRD ALL INDIA KDOCATIONAL SURVEY (1979-82) : I t is now realized that the schools have to play a much greater role than merely providing class room instructions . They have to provide facilities and service to the pupils for their physical well-being while games and sports are regarded that the available equipments is adequate. Again, in case of primary schools, the proportion of schools at this stage in rural areas is comparatively less (20.28%) than those in urban area (40,43%). Thus the position regarding accuracy is far from satisfactory, both in urban and rural areas. SKCQNDARY AND HTGHKR SECONDARY SCHOOLS: Out of 47,621 High and Higher Secondary Schools and Pre-University Colleges 33,572 institutions either own their play ground or share it with others. So far possession of games and sports material is concerned, it is observed that 39,046 (91.61%) schools have this facility with them. Thus i t is observed that at least 84.74 institutions possess games and sports equipments, but

do not have play ground facilities. Coming to states it is seen that more than 80% institutions have got games and sports materials. It appears that in Andhra Pradesh (95%), Assam (98.04%), Hariyana (93,08%), Karnataka (93.08%), Jammu and Kashmir (94,04%), Kerala (97,02%), Madhya Pradesh (91.09%), Manipur (90.06%), Nagaland (94%), Orissa (28%), Punjab (95.02%) institutions have facilities for games and sports equipment. In case of secondary schools and Higher Secondary Schools it is observed that (95.04%) of institutions situated in rural areas have sports and games materials with them, whereas the number is only (85.07%) in urban areas. Even in regard to adequacy, it is seen that in (52.08%) institutions, it is adequate, which is much higher than institutions in middle and primary level.

2.2 DIFFERENT COMMITTEE COMMISSIONS REPORTS ON PHYSICAL EDDCATION;

The Government of Bombay was anxious to develop Physical Education. In 1952 a committee under the chairmanship of Mr. K.M. Munshi was appointed to report on physical education, but its recommendations remained in cold storage due to economic stringency that affected India along with other countries of the world. A number of special committees were appointed to investigate into and report upon the various aspects or the problem. Some of them are described below:-

SWAMY KUVALAYANANDA-CHOTUBHAI PORANI COMMITTEE (1937): The p opular M in is t r y in Bombay appointed this First Special Committee in September 1937 (I) to suggest measures for the improvement and development of Physical education (2) to draw up an actual scheme of physical education for primary and secondary schools. The committee submitted its report within three months and there in recommended the following: 1) The ideal and objectives of physical education should be redefined and the need of integrating physical education with intellectual education should be stressed; 2) A standing Advisory Committee or State Board to advice Government on all matters pertaining to physical education should be appointed; 3) A supervising staff for physical education should be appointed; 4) A Training Institute for the training of teachers in physical education should be established on the same lines as the Y.M.C.A. College o f Physical Education at Madras; 5) Short-term courses in physical education for secondary teachers should be conducted; 6) Physical education should be introduced as a compulsory subject in all schools; 7) Indigenous physical education activities should be revived and included in schools syllable and' 8) There should be recognition of gymnasia for grant-in-aid; Most of the recommendations of the committee were accepted by the Government and it may be said that the development of physical education in the state during the period and after has been mainly guided by the recommendations of the committee. For example, the Training Institute for physical education was established by the Government in 1938 at Kandivali (Bombay) with Mr. P.M. Joseph as the Principal; Mr. P.M. Joseph worked as the principal for nearly 20 years and gave the college a sound foundation. His administrative capacities attracted the attention of the education Ministry, Government of India. SWAMY KOVALAYANANDA COMMITTEE (1945): Government appointed this second special committee (1) to report on the working and future development of the training institute for physical education, Kandivali, and (2) to report on the general progress of physical education in the state. This committee submitted its report in 1946 and made the following recommendations. 1) The ideal of world citizenship may be achieved through a properly organized programme of physical education. 2) The State Board of Physical Education should be reconstituted with a full- time paid Secretary. 3) A new post of the State Inspector of Physical Education should be created and he should be given an adequate subordinate staff. 4) The condition State the training institute for physical education, Kandivali, should be improved and its staff should be made permanent. 5) One year certificate course in physical education

should be conducted for matriculate teachers, and private institutions should be recognized forth at purpose. 6) Private institutions should also be recognized for conducting short-term courses in physical education for Secondary Teachers. 7) Short-term in Physical Education for Primary Teachers should also be instituted. 8) An examination in physical education should be instituted for all secondary school pupils. 9) A chief school medical officer should be appointed and a scheme for the medical inspection of school children should be organized; and 10) The Grant-in-aid to Secondary Schools and gymnasia should be Increased form 25 per cent to 33 per cent. Most of recommendations of the committee also were accepted by the Government of Bombay.

THE TARA CHAND COMMITTEE ON SECONDARY EDDCATTON IN INDIA (1948): In May 1948, the Government of India set up this committee. The report of this committee cover all the factors involved in a programme of physical education and I the improvement of the standard of games and sports, including Olympic sports. The committee detailed recommendations concerning the central institute of physical; education for men and women. The committee felt that in drawing up the courses, every endeavour should be made to utilize the indigenous material on physical education to the best advantage to secure its proper integration with the western system in such a way, as many ultimately be con The general, deficiencies of physical education at the time of independence as pointed by the University Education Commission (1948-4Q) is well observed by the Investigator and summarized as that there is lack of interest both on the part of the students and the authorities, in sufficient trained personal, dearth of play ground and equipment, poverty of students, absence of organization, poor types of programmes, small variety of games conflict with academic work, and in-convenience of time. These seem to be the most recurrent obstacles. Further the investigator is of the view that the commission was of the view that little improvement could be accomplished without establishing the prestige and importance of the work. More expert leadership and adequate staff should be provided, and the professional status and pay of physical education personnel should be recognized as on a par with academic instruction. The provision of gymnasia, play grounds and equipment was also essential. It has come to the notice of the investigator that health habits should be ingrained in to school children and systematically include to the college stage if our young men and women are to have the physical and mental health which is essential to individual and national power and happiness. Further the commission also recommended that (1) Degree course in Physical Education be set up in certain Universities. There should be at least one such degree course in each province; (2) each University and college should appoint a properly qualified (either a M.D. or a Ph. D) director of physical education who should have the status and pay of the other heads of Departments, (3) All the recommendations of the Tara Chand Committee, particularly about the establishment of the central institute of physical education should undergo execution and this central institute should offer as a post-graduate degree to teach advanced courses leading to specialization in various fields of physical education that is organization, administration, recreation etc. such post-graduate course leading to a doctorate should be set up at one university in each province where Directors of physical education may be trained (4) There must be provision of adequate gymnasia, playgrounds and physical facilities. (5) There must be enlarged staff for compulsory physical training during assigned physical education periods. (6) Two years of physical education should be required of all university students except the physically unfitted those in the National Cadet Corps. (7) The department of physical education should be headed by the Director of Physical Education who should look after :- a) Courses in Physical Education, b) The gymnasium and gymnastics, boxing, wrestling, indigenous activities, exercises etc, c) Inter-University and Inter-College Competitions. d) Intra-mural competitions. 8) The present plan of National Cadet Corps would not give students the amount

of type of training required to make affective oldies in case o f emergency. To make corps more effective for national defense, the following suggestions were made:- a) The centre should take over from the provinces and states the responsibility for the administration of the Corps. b) The center should detail regular officers and men from the Army, Navy and Air Corps for instruction in the Universities and colleges. c) There should be a through inspection of all unites at least once a year by regular officers who are not associated with the units. A special session of 'the Central Advisory Board of Education was convened in April 1950 to discuss the afore-referred Report of the Radhakrishnan Commission on University Education (1948-49) which had recommended that the University Grants Commission be set up for allocating grants. It was also at the suggestion of the Board that the Central Advisory Board of Physical Education and Recreation was established in 1950, and the recent development of physical education in the country is largely due to this happy beginning. THE MODALIAR COMMISSION ON SECONDARY EDUCATION(1952=53): A number o f commissions were appointed in the past to survey Indian Education. The Indian Education (Hunter) Commission o f 1882. The University Commission of 1902, The Calcutta University (Sadler) Commission of 1917, The Hartog Committee of 1929. The Sapru Committee of 1934 and the recent Radhakrishna Commission of 1948-49 all of which dealt incidentally with certain aspects of Secondary Education. But no Commission had so far been appointed to survey the problems of secondary education as a whole. So the Mudalier Commission had been entrusted with this responsibility. The appointment of this commission had been made very opportunately because there was clear evidence of serious interest in this problem all over the country. Many recommendations o f the above listed commissions had not been implemented. Many responsible people had therefore, questioned the likelihood of any steps being taken to examine and implement the recommendations of this commission. In reply, this commission wished to point out that India's needs of today after Independence were different from what they were in the past under foreign domination. This Secondary Education Commission under the Chairmanship of Dr. Laxmanswami Mudaliar made it clear. i) that economising in health education and physical welfare is unsound economy because the state has to spend much more on medical services than it would under properly organised schemes of physical and health education. ii) that unless physical education is accepted as an integral part of education and the educational authorities recognize its need in all schools, the youth of the country, which forms its most valuable asset will never be able to pull their full weight in national welfare. iii) that physical education is much more than mere drill or a series of regulated exercises; it includes all forms of physical activities and games which promote the development of the body and mind. The commission recommended that the training in physical education should be comprehensive enough to include all aspects of health education; physical activities should be made to suit the individual and his capacity for physical endurance; full records of physical activities should be maintained; teachers of physical education should be given the same status as other teachers of similar qualifications; and other teachers of the school below the age of 40, along with the physical instructor, should actively participate in the many of the physical activities of students. The teachers of physical education should be associated with the teaching of subjects like physiology and hygiene and the existing facilities for the training of teachers of physical education should be expanded by increasing the seats in the existing colleges, by opening new colleges, where necessary and by reorganizing some of the institutions as All India Training Centres to which aid may be given both by the centre and the states. Regarding health education, the commission emphasized the need for a properly organized school, medical services in all states and a through medical examination of all pupils with follow up and treatment where necessary. The commission recommended that for special subjects like physical education, domestic science, Art, Music, etc. there should be attached to the Director's office certain experts in these subjects who will inspect the different schools periodically and

help in improving the standards of teaching. The Central Advisory Board of Education appointed a special committee to look into the important recommendations of the Mudaliar Commission on Secondary Education (1952) and to indicate their order of priority. The report of this committee was the basis of two programmes implemented during the Second Five Year Plan, that is the conversion of selected secondary schools into multi-purpose schools and the replacement of the old secondary system by the new higher secondary system.

SEMINARS ON PHYSICAL EDUCATION(1958): The Union Ministry of Education arranged two Seminars on Physical Education in 1958 as follows. 1) THE ALL INDIA SEMINAR FOR PRINCIPALS OF COLLEGES OF PHYSICAL EDUCATION: The seminar for principals was held at Madras in February, 1958. Some of its most important recommendations were as follows 1) There should be medical examination of all school children; 11) There should be more Degree Colleges of Physical Education in the country, at least one in each zone; and iii) There should be a National Research Council of Physical Education preferably at Delhi which should undertake research projects for practical application. 2) THE ALL INDIA SEMINAR ON PHYSICAL EDUCATION FOR STATE INSPECTORS AND UNIVERSITY DIRECTORS: The All India Seminar for state Inspectors for Physical Education and University Directors of Physical Education was organised from 16th to 30th May, 1958, at Mahabaleswar, under the directorship of Sri D.G. Wakharkar, by the Union Ministry of Education. Such seminars were expected to bring together the workers in the field of physical education, with a view to studying their problems intensively and sharing the views and experience at a stage, when physical education was undergoing changes in contents and methods and when there was a great need for the workers in the field to understand these modern ideas and trends. The object of the seminar as suggested by the Union Ministry of Education, was to discuss the present system of inspection and supervision of physical education and also the development of physical education at college/university level in the context of the National plan of physical education and Recreation prepared by the Central Advisory Board of Physical Education and Recreation, and to discuss the development of physical education activities in the community as a whole. MAJOR RECOMMENDATIONS: Major recommendations of the seminar are summarized as follows:- 1) PHYSICAL EDUCATION AT THE SCHOOL LEVEL a) Physical Education should be a curricular subject in the schools a tall levels and should be on par with the subjects. b) The programme of physical education and recreation should cater to the needs, interests and capacities of the pupils and should have "Carry over" value. I t should promote normal growth and development, maintenance of health, acquisition of skills and desirable social attitude and behavior, c) Leadership in the field of physical education should consist of : i) qualified staff ii) specialist coaches/ and iii) student leaders. d) Any of the following qualifications should be considered as an approved qualification for a person to work as a physical education teacher in a secondary school. 1) A Degree in Physical Education 2) A University Degree with a Diploma in Physical Education 3) A pass in Intermediate or its equivalent with a certificate in physical education; 4) A pass in Matric or S.S .L .C . or S .S .C . or S.F. Examination with a certificate in Physical Education. e) In Primary Schools, Classroom teachers should teach Physical Education. f) Periodical refresher courses should be organised for in-service physical education teacher. g) Special coaching camps should be conducted for school physical education teachers at Government cost. h) Play grounds should be provided by schools as laid down in the National plan of Physical Education and Recreation. Schools may, however, have playgrounds with the following minimum limits: CATEGORY BOYS GIRLS 1) High Schools 5 Acres 3 Acres 2) Middle Schools 3 Acres 2 Acres 3) Primary Schools 4 to 1 Acre to 1 Acre i) Schools having excess open space may be required to permit the use of such open space by the neighbouring schools. j) Kach school should have an indoor Gymnasium with the dimensions of 60 x 15' k)

Schools should provide daily one period for physical education in the time table. 1) The syllabus given in the National Plan of Physical education and recreation should be followed in all schools with suitable modifications wherever necessary. m) Medical inspection should be compulsory for all pupiIs.

2) PHYSICAL EDUCATION IN THE UNIVERSITIES:
1) In order to plan and promote physical education, a Department of Health, Physical Education and Recreation should be created in each university. 2) The University Grants Commission be requested to make adequate grants to the Universities for the establishment of the Department of Health/ Physical Education and Recreation. 3) Adequate provision for the medical inspection and follow-up work of college students should be made by appointing a special medical officer at each university. 4} The universities should include compulsory and optional physical education activities. The N.C.C. should not be sub situated for the physical education programme.

THE AD-HOC ENQDIRY COMMITTEE ON GAMES AND SPORTS(1 9 5 8 - 5 9):
There was much criticism in the press and among public of the poor performance of Indian teams in international competitions and the general decline of sports in the country. Indian athletes had not been able to secure even the 7th or 8th position in Olympic competitions. India's position was second in Asian Games held in Delhi in 1951, fourth in Manilla in 1954 and seventh in Tokyo in 1958. The Government of India therefore appointed an Ad-hoc committee in 1958 under the chairmanship of the Maharaja of Patiala to investigate the persistence of low standards in sports in India and the performance of the Indian teams in international contests, such as Olympics and Asian Games, and to recommend measures for improvement. Its terms of reference were to enquire into the reasons for the poor performance of Indian competitors in international contests, to suggest measures to arrest the gradual decline in the level of performance; and to recommend steps for the improvement of standards.

THR KUNZRU COMMITTEE i.958-59) The Kunzru Committee is also known as the committee for co-ordination and Integration of schemes operating in the field of physical education, recreation and youth welfare. It was appointed by the Government of India in 1958-59. I t recommended guidelines for coordinating and integrating various schemes relating to physical education and youth development. It submitted its report in 19 64. It may not be out of place to mention here t h a t Pt. H.N. Kunzru was thoroughly acquanted with the developments in the field of Physical Education and sports over a period of more than 20 years. He was instrumental to replace U.T.C. by N.C.C. & A.C.C. was the Chairman of Nation Cadet Corps Committee (1946) which launched the N.C.C. schemes in 1948. The culmination of the recommendations of the Kunzru Committee (1958) took place in the formation of National Fitness Corps in 1965. THE SCHOOL HEALTH COMMITTEE (1960 ^ The School Health Committee was appointed under the Chairmanship of Srimati Renuka Ray by the Government of India in February 1960 to assess the present standards of health and nutrition of school children and suggest ways and means of improving them.

TERMS OF REFERENCE

a) To examine the present position of school health programme in the country in all its aspects (excluding physical education, games and sports), that is, prevention of diseases, medical care and follow up service, nutrition, health, education healthy environment etc. of the students at all stages of education and to suggest; (1) further survey o f studies if required, and (2) how the work of various agencies such as medical, social and welfare associations can be co-ordinated to assist in the promotion of health of school children. b) To examine studies and survey so far made to assess the

nutritional standard of school children and to indicate: i). further survey or studies needed in any specific areas, and (ii) to give concrete suggestions to institute appropriate measures to improve standards of nutrition among school children recommending, inter - alia ways and means for financing and organising such a programme. c) To examine and recommend the possibility of entrusting Primary Health Centres and other organisations for conducting a comprehensive and realistic school health programme in association with the local education administration. The recommendations should include measures to develop an effective school medical service suitable to the country.

d) To examine the present facilities available for promoting nutritional standards of pre-school children and to suggest practical measures to improve the present position. THE KOTHARI EDDCATION COMMISSION (1964-66) It was appointed by the Government of India by resolution dated 14th July 1964 to advise Government on the national pattern of education and on the general principles and policies for the development of education at all stages and in all respect, RECOMMENDATIONS ON PHYSICAL EDUCATION The commission views on Physical Education are as follows T h e r e has been a t e n d e n c y in r e c e n t g o v e r n m e n t schemes of physical education to emphasize only the physical fitness value of physical education and ignore its educational values. Physical education should include developmental exercises, rhythmic activities, sports and games, outing activities and group handling activities. All these have simple and advanced forms. The simpler activities should be introduced in the early classes, the more advanced ones should be gradually provided as boys and girls become more and more mature. The very young are not psychologically and physically mature for formal and vigorous forms of activities. Their sense of basic movements and coordination has to be developed gradually. The syllabus for the -young at the pre-primary and the early primary stages should be based on their desire to imitate movements around them, their spirit of play, their wanting to dare and to do something better than their comrades. This is the most vital stage of 'education through movement'. A child should develop mastery over basic skills, such as walking properly, running, dodging, throwing etc. Higher forms of coordination like accuracy and precision must wait for the next stage. As the child grows into the pre-adolescent stage his interests and capacity change and physical education should provide for more challenging activities, opportunities for simple team play and finer forms of skills. The adolescent in the secondary school desires to imitate the activities of the adults, and he should be taught sports, games and athletics in their standard form. Skills learnt earlier should be perfected through g u i dance and practices. It is an age when boys and girl’s desire excellence and the physical education syllabus must include techniques for good performance. At the primary stage, except in the last two classes a common syllabus for boys and girls can be used. From there onwards, the syllabus should be planned separately keeping in mind their respective interests and abilities. Rhythmic activities will have an appeal for girls, non - contacting less strenuous games such as badminton, throw-ball, etc. are popular. The more vigorous games, such as basketball, netball and hockey may be brought in at a later stage. The preparation of programmes of physical education for all stages should take into account not only what is useful but also what is possible in view of the limitation of facilities, time and number of teachers. In recent years, a number of schemes like the National Plan of Physical Education prepared by a group of experts at the request of the Ministry of Education, the National Discipline Scheme and the Auxiliary Cadet Corps with several common activities began to view with one another. The committee tried to bring about a compromise between the claims made by the enthusiasts of different schemes, and the result is a mixed programme of physical education called the

National Fitness Corps. There is a danger that in the implementation of the new scheme, the educational purpose of the programme might be forgotten or neglected.

THE TSHWARBHAI PATEL RRVIKW COMMITTEE ON THE CDRRICULAM FOR THE TEN YEAR SCHOOL (1977);
Dr. P.C. Chunder, Union Minister of Education and social welfare, in his capacity as president of NCERT, felt that an objective assessment of the syllabus and text-books should be made and, therefore, in June 1977 he appointed a Review Committee under the Chairmanship of Shri Tshwarbhai Patel, OPINION OF REVIEW COMMITTEE ON PHYSICAL EDUCATION By nature the urge of most children is to be active. The child needs both mental and physical activities without which the harmonious development of both body and mind cannot be achieved. In general, the aim of physical education should be to provide physical and mental satisfaction through movements of various types and by creative physical activities. It should develop alertness of mental and physical response to commands and directions, and help to maintain suppleness of the body. It should stimulate respiration and circulation and thus aid growth in children and ensure health. It should encourage children to be happy and independent, and to approach physical tasks with confidence, SDGGESTED PROGRAMME (a) Primary Stage (Classes I to VI) The activities should be of two types : (i) those which involve functional movement and aim at muscular co-ordination, that is dance, games, gymnastics, and (ii) those which are concerned with movements as a "means of exposition", (b) Middle and secondary stage (Classes VI to X); At the middle stage there should be basic courses reinforcing what has taken place in the primary stage. The programme may be varied. Even then account must be taken of the immaturity and lack of bodily development and stamina.

NATIONAL POLICY ON EDUCATION 1986 (Programme of action 1992) More information about the present position of health, yoga and physical education in the school education curricula of different states and Union Territories is available. However, at present, adequate participation and satisfactory performance in sports and physical education is not considered a necessary condition for promotion to the next higher class in the case of other subjects.

PHYSICAL EDUCATION AND SPORTS: Action in following areas will be necessary to implement the policy objectives of the National Policy on Education, 1986:- i) In deciding the curriculum load the need to allocated sufficient time to sports and physical education which the National .Policy on education, 1986 holds as an integral part of the learning process, should be kept in mind. ii) Physical education and yoga should be introduced for at least 45 minutes per day, preferably just after assembly. iii) Approved games should be included in the school time table for at least two periods in a week. iv) Special incentives will need to be given to students who perform well in sports and games. v) Special incentives may be considered for subject teachers who perform extra duty in conducting classes in physical education, yoga, sports and games. vi) The basic equipment, such as football and volleyball may be provided to each school. Similarly, some amount of contingency may be provided to each school. vii) A scheme for the creation and improvement of play grounds should be taken up on a phased basis under JRY and NRY. viii) An intensive and extensive programme of teachers training to equip all subject teachers with the necessary skills to impart training in physical education, games and yoga will be necessary. ix) The present programme to train and recruit physical education for high schools should be expanded. x) New schools may be established / recognized on by if playgrounds are available. xi) A comprehensive system of Inter-school tournaments and championships in select disciplines should be introduced over a period of time. This system should culminate in a National school championship. xii) Special cash award to winning schools and a special system of incentives for successful athletes also need to be introduced.

As the co-ordination and co-operation of all state Governments and Union Territories will be necessary to implement the above suggestions, it is recommended that this issue may be taken up and discussed as a special agenda item in a special meeting of Central Advisory Board of Education, The following are the other proposals of National Policy on education, 1986:- i) For private schools and colleges, special schemes to encourage investment in sports infrastructure may be introduced by providing income tax benefits to any investment or endowment made for sports or sports promotion. The Ministry of Finance would be approached in this regard. ii) Special incentive of girls, scheduled castes and scheduled tribes should also be evolved to ensure that their participation remains proportional to their population. iii) Special and attractive alternative will have to be evolved for students who are physically unable to participate in sports and games.

The National Policy of Education (NPE) in 1986 recommended that teacher education is a continuous process and its pre-service and in-service components are inseparable. The National Policy of Education (NPE), in 1986 and its Programme of Action made a strong case for improving the quality of teacher education because it was the prerequisite to improve the quality of school education. The NPE (1986) linked in-service and pre-service teacher education on a continuum; it visualized the establishment of District Institutes of Education and Training (DIETs) in each district, up gradation of 250 colleges of education as Colleges of Teacher Education (CTEs), and establishment of 50 Institutes of Advanced Studies in Education (IASEs), and strengthening of the State Councils of Educational Research and Training (SCERTs). The Acharya Ramamurti Committee (1990) in its review of the NPE 1986 observed that an internship model for teacher training should be adopted because "…the internship model is firmly based on the primary value of actual field experience in a realistic situation, on the development of teaching skills by practice over a period of time." The Acharya Ramamurthi Review Committee (1990) recommended that in-service and refresher courses should be related to the specific needs of teachers, and that evaluation and follow-up should be part of the scheme. Yashpal Committee (1993) noted that inadequate programme of teacher preparation leads to unsatisfactory quality of learning in school. Therefore, the B.Ed. programme should offer the possibility of specialization in secondary or elementary or nursery education. The duration of the programme should either be one year after graduation or four years after higher secondary. The contents of the programme should be restructured to ensure its relevance to the changing need of school education. The emphasis in these programmes should be on enabling the trainees to acquire the ability for self-learning and independent thinking. By the year 1998-99 there were 45 District Institutes of Education and Training (DIETS), 76 Colleges of Teacher Education (CTEs) and 34 Institutes of Advanced Studies in Education (IASES). The statutory NCTE further came out with a Curriculum Framework (1998) to provide guidelines in respect of the content and methodology of teacher education. As a result of this, many universities and state governments revised the courses of teacher education. The statutory NCTE further came out with a Curriculum Framework (1998) to provide guidelines in respect of the content and methodology of teacher education. As a result of this, many universities and state governments revised the courses of teacher education. The National Curriculum Framework (NCF) 2005 Peace education as an area of study is recommended for inclusion in the curriculum for teacher education. Teacher education, radical steps are required to reverse the recent trend towards the dilution of professional norms as recommended by the Chattopadhyaya Commission (1983-85). Pre-service training programmes need to be more comprehensive and lengthy, incorporating sufficient opportunities for observation of children and integration of pedagogic theory with practice through school internship. Subject area, consisting of health education, physical education and yoga, must be suitably integrated into the elementary and secondary pre-service teacher

education courses. Teacher education programmes should consider introducing peace education as an optional subject of study. Teacher education programmes should consider introducing peace education as an optional subject of study. Teacher education must become more sensitive to the emerging demands from the school system. For this it must prepare the teacher for the roles of being an: encouraging, supportive and humane facilitator in teaching-learning situations to enable learners (students) to discover their talents, realize their physical and intellectual potentialities to the fullest, and to develop character and desirable social and human values to function as responsible citizens. In the context of change perspective, it is imperative to pursue an integrated model of teacher education for strengthening the professionalization of teachers. Teacher education is multidisciplinary in nature within the context of education. In other words, conceptual inputs in teacher education need to be articulated in such a manner that they describe and explain educational phenomena—actions, tasks, efforts, processes, concepts and events, Such a teacher education programme would provide adequate scope for viewing a theoretical understanding and its practical aspects in a more integrated manner rather than as two separate components. The teacher now acts as a facilitator, transforming information into knowledge/ wisdom, as a supporter in enhancing learning through multiple exposures, encouraging the learner to continuously achieve his/her educational goals. National Knowledge Commission (2007) has made considerable progress in school education since independence with reference to overall literacy, infrastructure and universal access and enrolment in schools. National Curriculum Framework for Teacher Education (NCFTE) 2010 highlighted that the education and training of a prospective teacher will be effective to the extent that it has been delivered by teacher educators who are competent and professionally equipped for the job. To improve the quality of teacher education program, the National Council for Teacher Education (NCTE) took up a number of initiatives during the last decade. It joined hands with the National Assessment and Accreditation Council (NAAC) to foster quality assurance and sustenance. The Right of Children to Free and Compulsory Education (RTE) Act, 2009, which became operational from 1st April, 2010, has important implications for teacher education in the country. To enhance quality of school education Teacher Eligibility Test (TET) for Teachers and Principal Eligibility Test (PET) are conducted at both level at state and at central level. For teacher education UGC conducts National Eligibility Test (NET) at national level and State Level Eligibility Test (SLET/SET) at state level. Teacher Education in Five Year Plans–In five year plans teacher education got 10% share of the total education, resulting into an increased output in training schools and training colleges. Output of training schools doubled during 1951 to 1961. It increased three times in 1966. There were 29 institutions in 1966 providing M.Ed. and PhD courses. NCERT was set up in September 1961. NCERT started teacher education programme in 1964. Establishment of SIE (State Institutes of Education) and SISE (State Institutes of Science Education) took place in 1964 to upgrade science education at high school level. Science Institutes were opened. During 1969 to 1979 priority was given to expansion of elementary education with special emphasis on backward sections and girls. Correspondence and inservice programmes were emphasized. Fourth and Fifth plans provided correspondence courses to about 1, 40,000 elementary teachers, 17,600 secondary teachers. With the assistance of NCERT and UGC an organized correspondence and inservice programmes, B.Ed. course was started by Himachal University and later by Jaipur University and several universities in South India. There are training colleges which are exclusively run by Government. Regional Colleges are being run by NCERT – Ajmer, Mysore, Bhuvaneshwar and Bhopal. In Uttar Pradesh there are two types of training colleges – JTC and JBCT. Teachers trained by these JBTC colleges work in Junior High School. JTC works in primary school. Regional Colleges carried out programme for primary teachers (B.Ed. Primary); training of teachers for pre-primary level and for students like mentally retarded children, physically handicapped children. NCTE Act was passes in

1993 by the Parliament by which it is the responsibility of NCTE to look after the Teacher Education of the country The Eleventh plan is quality plan in respect of the education sector. The following specific programmes are proposed to be taken up in teacher education during the Eleventh Plan. Strengthening Teacher Education by 1. Developing teacher education Information Base in Public Domain, (ii) creating additional support systems in the field, and (iii) strengthening academic capacity. Augmenting teacher education capacity in SC/ST and minority areas. 2. Professional development of teacher through training programmes. 3. Professional development of teacher educators through Refresher Courses and Fellowship programmes. 4. Support to NGOs. 5. Technology in teacher education. 6. Integrating elementary teacher education with higher education. In the Twelfth FYP, an important thrust area would be to introduce technology in teacher education in order to promote openness for adaptability to new technology for developing professionalism. The Teacher Education Scheme should be implemented in partnership with states. Conclusion: Teaching is a highly professional activity which demands specialized knowledge, skill and behavior. Teacher professionalism comprises competence, performance and behavior which reflect on teacher's personality in school and society. Professional competence is fundamental in teaching profession which includes preparation of teacher for classroom processes, acquisition of knowledge of subject and facilitates personality development of children. Competencies of an effective teacher include interpersonal communication, pedagogical empowerment and organizational leadership. Professional competence results in performance of teacher in terms of overall development of children. The competent teacher is supposed to perform better in the interest of the children and society as well. It has been aptly remarked, "If you educate a boy, you educate one individual but if you educate a girl, you educate the

whole family and if you educate a teacher, you educate the whole family and if you educate a teacher, you educate the whole community". Teacher education is not teaching the teachers how to teach. It is to kindle his initiative, to keep it alive, to minimize the evils of the "hit and miss" process and to save time, energy, money and trouble of the teacher and taught. Teacher education is needed for developing a purpose and for formation of a positive attitude for the profession. The success of the educational process depends to a rigid extent on the characteristics and ability of the teacher who is the corner stone of the arch of education. The expansion of teacher education was observed in terms of quantitative and qualitative aspects. All the above described commissions and report emphasis on the quality of teachers in general and teacher educator in specific. At present teachers are not the mere transmitters of information but facilitators in the path of students urge for more knowledge. The existing teacher training institutions of the state has yet lot to do for teachers in order to articulate innovations in terms of approach, pedagogy for qualitative improvement of school education so that they can response to the various demands of the student community. Historical Development of Teacher Education in J&K. Jammu & Kashmir State is the northern most part of the India with population more than one crore as per Census figures and covers the area of approximately 2,22,236 sq. Kms. The state is divided into three regions namely, Kashmir, Jammu and Ladakh and further subdivided into 22 districts for administration and carrying out developmental programmes. The State of J & K has its own Constitution besides the Constitution of India and enjoys special status under article 370. Topography of the State comes in the way of developing adequate infrastructure and is further compounded by terrorism and militancy, which have taken a heavy toll of life and public property besides throwing normal life out of gear. Education could not escape from this tragedy as most of the educational institutions in rural areas in the valley were destroyed and loss of schooling hours immensely affected the learning outcomes. As per Economic Survey 2006-07, the State of J&K lags far behind in social sector i.e. education, public health, sanitation, and social welfare. Per capita

income comes out at Rs.17,174 per annum as against the national average of Rs.25,907. J&K figures among the last four most illiterate and educationally backward state. It is fact that no system of education can rise above the level of its teachers. Good teachers are invaluable assets for nation building and this fact has been recognized and highlighted in the National Policy of Education (1986). This emphatically calls for a drastic and urgent revision in the existing policies and practices regarding recruitment, training and retention of teachers based on well tried out programme of innovation, experimentation and research. Therefore, teacher education is in urgent need of reorganization so as to ensure the highest quality and standard. The system of teacher preparation or training in J&K has come under sharp criticism at the hand of both experts and public at large. Critics have termed our system of teacher preparation as "obsolete" "bookish"' "ill concerned", impractical", "ill planned", "uninspiring" and "mushroom growth". It affected adversely: (a) the quality of faculty and the head, (b) access and use of learning resources (library and ICT), (c) teaching and evaluation methodology, and (d) professional development. It also suffers from 'adhocism', 'politicization', 'groupism', 'and half hearted efforts at developing teacher competencies among prospective teacher'. The casual implementation of preservice programme for student teacher could not produce good teachers. It is divorced from realities of the school and suffers from lack of financial support. These institutions, therefore, are need to be revamped to produce professionally trained teachers, fully equipped with both high academic standards, pedagogical practical skill, ethical and moral values. In the back drop of the past, quality in teacher education has always been given top priority by the rulers of J&K state. In order to improve the quality of teaching and to leaven student's learning activities with conscious efforts and perseverance, these rulers laid much emphasis on frequent revision of pedagogic learning contents and on periodic seminars and group discussions. The outstanding teachers were given certificates and cash awards. They also provided substantial grants and scholarships for training of teachers at the local normal schools and the college at Lahore. As a result, the number of certificated teachers increased every year but the proportion of untrained teachers still remained large, especially in the Kashmir province. In 1939, the Saiydian Committee Report recommended that teacher training schools should be properly staffed & equipped and a scheme of Refresher courses for all categories of teachers should be started to acquaint teachers with new thought and trends in education. As a result, sufficient funds were allocated for ungradation of labs, library and building of teacher training school. Refresher courses were started for enhancing competency of teachers. In 1948 Govt. College of Education was established at Srinagar. It is a premier and historic institution which started its work as Teacher Training School in 1937 and thereafter was promoted to the status of College of Education in 1948. It has been rendering the services of training and educating the pupil teachers- B.Ed. and M.Ed. (Inservice and pre-service). e MHRD team visited the institute in April, 2013 and recommended the up-gradation of College to Institute of Advanced Studies in Education (IASE) in the Joint Review Mission Report. The Higher Education Department, Govt. of J&K issued orders for up-gradation of the college in August 2016 vide Govt. Order No: HE/UP-grad/COES/CSS2013/78 dated:04/03/2016. The college is presently also running the M.A Education course by working as "School of Education" in Cluster University under RUSA. In 1950, the Kazimi Committee Report observed that untrained and unqualified teachers could not produce the best results. Moreover, teacher education institutions were not equipped with infrastructure such as building, labs, and library and the teaching staff deployed was also not qualified and trained. The committee recommended that no untrained teachers should be recruited to the department and that qualified and trained teachers should invariably be posted in the teacher training schools to improve the quality of teacher education in the State of J & K. The Committee also recommended the scraping of Basic Education Course, Junior Vernacular, and Senior Vernacular (BEC, JV& SV) and the institution of a uniform training to be called certificate in

Teaching (CT). Most of the recommendations of the committee were implemented to raise the standard of teacher education. After independence, Sheik Abdullah, the then Prime minister of J & K State took initiative to improve the quality of teacher education. Teacher pay scales were revised on the basis of qualification and training. Scholarships and incentives were provided to the teachers undergoing teacher training courses outside the state. By the end of the year 1956 two full fledged teachers training colleges each in J & K were set up. The concept of multipurpose school was initiated in the country in the year1952-53 and J & K was the first state to accept that proposal and in consequence there of three multipurpose schools were started in the first instance state. Teachers were also gradually trained to cater to the needs of the new courses of studies. In 1972, Bhagwan Sahay Committee Report observed that one of the weakest areas in the state was that of the training of teachers. The percentage of trained teachers was low as 63% in primary school, 78% in middle school & 89% in secondary schools and the duration of training for primary and middle school teachers was only one year as against the needed two years. There was hardly any provision for in- service education. The teacher training schools did not have adequate status and high quality staff. They were also not properly provided with building, land, labs, libraries, hostels and equipments. The committee recommended that: -Infrastructure i.e. buildings, labs, library, hostels should be provided at teacher training schools and college level. -Qualified & trained teachers should be posted in teacher Education schools and colleges. -Teacher in college of education should have a master degree in education (M. Ed.) -Model school at district level should be attached with teacher education school or college for practice of teaching. Resource persons (subject wise) should be identified & trained through subject expert of the NCERT. -In service programmes such as complex Programme, refresher courses based on selected themes, and refresher courses of two months duration for every teacher of five years of service. -The college should have three specific responsibilities-pre-service education of one year, refresher course for teachers and provision of extension service to schools in the district. They should function as local agents for many programmes of the State Institute of Education. As a result of the Committee Report, the backlog of untrained teachers was reduced. Teacher training schools and colleges were equipped with infrastructure and trained staff. Services of NCERT were requisitioned in the preparation of subject-wise resource persons who further trained teachers to improve the quality of education in J & K State. The First College of education in the private sector was sanctioned by the Government of Jammu & Kashmir in the year 1980-81 at Model Institute of Education and Research, Jammu to meet the burgeoning demand as well as to provide quality education. The first attempt was made in 1973 to restructure the curriculum and the document on teacher education was prepared. The objective of the teacher education programme in this document was to have change in the content and the design as also the restructuring of teacher education programmes. In fact the recommendations which were made through this document could not be translated effectively, meaningfully and purposefully by the state. As a follow up of 1986 Policy, a number of programmes were initiated to improve the quality of teacher education in J & K State. These include establishment of District Institute of Education (DIET) and Institutes of Advanced study (IASE) in Education. Substantial financial support was provided in upgrading of existing buildings, labs, library, hostels etc. Qualified trained and experienced teachers were deployed in teacher education institutions. Various programmes for teacher capacity building were initiated. Innovative good practices in teacher educational institutions were introduced. Restructuring of teacher training curriculum was carried out. More emphasis was laid on practice of teaching. In fact, much emphasis was laid on expansion of teacher education in the state of Jammu and Kashmir and little effort was made in the direction of improving the quality of teacher education. In 1990, the report submitted by NCTE Review Committee chaired by late Prof. Buch corroborates with prevailing teacher education scenario in J&K that leaving aside a few universities, department and colleges of Education

that can be counted on finger tips, a large majority of teacher education colleges are effectively run for less than three months a year. Practice teaching is a ploy. Guides rules the scene, learning from text books is unknown entity. As in all other colleges, a large majority of faculty reproduce what they had learnt as students" Under these circumstances, "there is an urgent need to make a detailed study of state of art of teacher education curriculum and research on teacher education."At present(2017), there are 148 B.Ed. colleges in the state where except two, the rest are private colleges with intake capacity of more than 44 thousand as against three colleges of education in the year 1981 with intake capacity of less than three hundred. More than 70 colleges of education opened during 2001 and 2003.

Recent trends of teacher education: Based on various changing needs of our society now emphasis is also given to the various educational theory and educational practices. According to these theories and practices changes are also undergo in teacher education also. It is natural that teacher education must include new technology. Teachers should also know the right attitudes and values, besides being proficient in skills related to teaching. As we know the minimum requirement of any training programme is that it should help the trainee to acquire the basic skills and competencies of a good teacher. Now-a-days new trends in teacher education are Interdisciplinary Approach, Correspondence courses, orientation courses etc. Simulated Teaching, Micro Teaching, Programmed Instruction, Team Teaching are also used in teacher education. Now-a-day Action Research also implemented in Teacher Education. ICT acts as the gateway to the world of information and helps teachers to be updated. It creates awareness of innovative trends in instructional methodologies, evaluation mechanism etc. for professional development. In 21st century has been expected teacher has to perform various roles like encouraging, supporting and facilitating in teaching-learning situations which enables learners (students) to discover their talents, to realize their physical and intellectual potentialities to the fullest, to develop character and desirable social and human values to function as responsible citizens. But unfortunately reality is different. Problems of teacher education There are various problems that obstruct the path towards the attainment of perfection and standard. Isolation of Teacher Education from community: In the present times the Teacher education has• acquired only a narrow framework leading to loss of linkage with the real life situations and experiences. Less duration of the course: The duration of the course is so less that a freshman fails to acquaint• himself with it, what to talk of perfecting it! Lack of orientation of Teacher Education: There is great dearth of the add up courses for the• continuous growth of the teacher. Lack of flexible approach to plans and programmes of Teacher Education: The plans and• programmes of Teacher Education are not modified keeping pace with changing requirements from the field. Lack of passion and enthusiasm for the occupation• Inadequate technology infusion• Invalid recognition and accreditation• Problems of practice teaching and supervision of teaching• Lack of facilities for professional development• PRESENT FACTUAL STATUS OF TEACHER EDUCATION The present factual status of teacher education can be briefly discussed with reference to NCTE new regulation, November 204. Besides the status studies the number of researcher initiated in the field of teacher education during the post independent period. Researchers have taken place with regard to teaching effectiveness, teaching skills, curriculum and educational technology. One of the most debated issues during recent years has been the duration of teacher education programme. It has always been felt that one year time is too little tp convert a student teacher into a professional. The NCTE teacher education curriculum framework, 198 suggests the need for having two years secondary teachers' education programme. Similarly, selection of content for teacher education programme is also another area of research. At present with slight variation, most teacher education programmes provide students with a mixture of foundation courses, knowledge of child development, teaching method classes and so forth. NCTE, New

Regulations, 2014 In order to bring in uniformity among the courses of teacher education conducted by the teacher education institutions and also to cater to the modern trends introduced in the educational system, NCTE in November, 2014 made various recommendations about the setting up and running of t teacher education institutions. Beside various teacher education programmes offered by this institutions should be according to the norms and standard as recommended by NCTE. Such course s can be named as Diploma in Pre -school education (DPSE), Diploma in Elementary Education (D.El.Ed), Bachelor of Elementary Education (B.El.Ed), Bachelor of Education (B.Ed), Master of Education (M.Ed), Diploma in Physical Education (D.P.Ed), Bechelor of Physical Education (B.P.Ed) and others. Among all these degrees, researcher would like to discuss the recommendation on B.Ed and M.Ed degrees in details as made by NCTE in 2014. Bechelor of Education (B.Ed): The Bachelor of Education degree that prepared teachers for Upper Primary, Middle Level, Secondary Level and Senior Secondary Level is offered in composite institution that are defined in clause (be) of the new regulation. The degree programme duration has been extended to two academic years and the minimum attendance of the Student-teachers shall have been made to 80% The B.ED. curriculum according to the new regulation shall be designed to integrate the study of the subject knowledge, human development, and pedagogical knowledge and communication skills. The programme shall comprise three broad curriculum areas : Perspective in Education, Curriculum and Pedagogical studies and Engagement with the field. Information and Communication Technology (ICT), gender, Yoga Education and Disability/Inclusive Education shall from an Integral Part of B.Ed. curriculum. Academic Faculty: According to the new regulations, for an Intake of two basic units of 50 students each that is total students strength of 100, there will be 16 full time faculty members. The distribution of faculty across different curricular areas shall be as under: Principle/HOD One Perspective in Education Four Pedagogy Subject (Math, Sc., Eight Social Sc., Language) Health and Physical Education One Fine arts One Performing Arts (Music, Dance, One Theatre) The qualifications and teaching experiences have also being mentioned in the new regulation. Regarding the infrastructure and faculties, instructions have clearly being made in the regulations. The teacher education institutions shall possess 2500 sq-mts. Of exclusive well remarketed land for the initial intake of 50 students and out of which 1500 sq-mts. Shall be the build up area and the remaining space for lawns, play fields etc. The institution must have the following infrastructure: a. 1 class room for every 50 students. b. 1 multipurpose hall. c. Library cum reading room d. ICT resource centre. e. Curriculum laboratory. f. Art and craft resource centre. g. Principle Office. h. Staff room. i. Administrative office. j. Seminar room. k. Canteen. l. Separate toilet faculties. m. Parking space. n. Store room. o. Multipurpose play field etc. DISCUSSION The numbers of teachers are the primary and the upper primary section has increased in the first decade of the new millennium. But comparatively, the development of number of teachers in secondary level is better than primary and upper primary. After independence, considering the importance of education for all huge initiatives has been taken for the development of teachers' education institution but unfortunately the reality is different. Even after the implementation of RTE result is unsatisfactory. CONCLUSION: After independence education was the sole priority for nation building. It was realized by our leaders and noble person that without education any nation can't stand according their own choice as well as requirements. So, try to depend on others countries for technological as well as scientific progress and development. As a second largest populated country mass enrolment was our first priority so initiative has been taken for fulfilling the first priority such as Sarva Siksha Abhiyan, RTE, RMSA etc. In the twenty first century our aim in education not only quantity but quantity with quality education. Therefore, without generating the quality teacher quality education is simply impossible.

5.1.2 Comparative study of professional preparation in physical education of India with USA

The early roots of physical education teacher preparation in the United States can be traced to the northeastern part of the country during the latter part of the 1800s. In 1952 Charles Bucher described a ten-week course at the Normal Institute of Physical Education in Boston (founded by Dio Lewis) as graduating the nation's first class of physical education teachers in 1861. A one-year course of study was developed in 1866 in New York City under the name of the North American Turnerbund. The Sargent School in Cambridge, Massachusetts, under the direction of Dr. Dudley Allen Sargent, began preparing teachers in 1881, and in 1886 the Brooklyn Normal School for Physical Education was opened.

In 1886 the International Young Men's Christian Association College at Springfield Massachusetts began operations. This institution, which evolved into the Springfield College, began with the mission to prepare physical education teachers for the Young Men's Christian Association (YMCA). Later, degrees at the bachelor's, master's and doctoral levels for study in physical education were awarded by this institution. In general, the preparation of physical education teachers in the late 1800s and early 1900s ranged from as little as two months to as much as five years.

Prior to World War I, preparation to teach physical education was primarily completed in normal schools. The poor condition of many of the men in the country who were called to serve in the war heightened interest in physical education. As a result of such concerns, there was some form of compulsory public school physical education in thirty-eight states by 1930.

At the beginning of the twenty-first century, the requirements for physical education teachers vary somewhat by state, since education is governed at that level rather than by national standards. The National Association for Sport and Physical Education (NASPE) has published guidelines for beginning teachers in an attempt to provide some professional leadership. These guidelines are not binding on either institutions preparing teachers or on state governments, where the responsibility of licensing teachers rests. In a collaborative effort with one of the major accrediting agencies for teacher preparation programs, the National Council for Accreditation of Teacher Education (NCATE), NASPE has created guidelines for programs seeking accreditation in the preparation of physical educators for initial certification.

Current Structure

Physical education teacher education (PETE) programs in the United States are designed around at least three models and five conceptual orientations. One model is delivered at the undergraduate level and two at the graduate level. At the undergraduate level, programs are usually delivered in a four-year program with course work in three major areas: general education (e.g., the broad concepts in many fields that the general public associates with an educated citizen), professional education (e.g., concepts specifically linked with what is known about teaching and learning), and content knowledge (e.g., the information unique to the field, often represented in a variety of subdisciplinary areas such as exercise physiology, biomechanics, and motor learning). The actual number of credits and sequence of these courses varies and is often dependent upon the philosophical orientation of the program and resources available to the faculty.

One type of graduate PETE program has evolved from various reform efforts, including the Holmes Group initiative. In this approach, students study for a four-year degree in the content area supporting the type of licensure they seek. In physical education, an undergraduate degree could be in sport studies, exercise physiology, biomechanics, or some other related subdisciplinary field. At the master's level, students then study the pedagogical content to learn how to deliver the content knowledge to students. This approach is a response to perceived needs of teachers to be better prepared in the content knowledge of their field.

A second type of graduate PETE program is sometimes characterized as a response to teacher shortages. In this approach, candidates have typically acquired an undergraduate degree in some field other than physical education. Graduate programs for this approach must include a combination of content knowledge and professional education. Students changing careers are often attracted to this model.

In 1990 Sharon Feiman-Nemser described five conceptual orientations to teacher education, regardless of the model; three years later Judith Rink provided adaptations to these models using examples appropriate to PETE programs. Both authors suggest that the conceptual orientation guides the delivery of content. In contrast to Feiman-Nemser, however, Rink suggests that it is possible for parts of each orientation to exist in any program.

The *academic* orientation holds that the subject matter knowledge is central. The focus of these programs is on games, sports, dance, and fitness knowledge. In the *practical* orientation, experience and conventional wisdom are the focal points. Field experiences are key parts of these programs, where students are given ample practice time with practice-proven methods of teaching. The *technological* orientation has also been characterized as systematic, science-based instruction where there is an emphasis on mastering teacher effectiveness skills. Instruction is based on research-based teaching for student skill development. The *personal* orientation is a more humanistic approach where the teacher and learner are considered as people first; teaching, learning, and content are secondary concerns. Individualization, nurturing personal meaning, and growth are hallmarks of this approach to teacher education. In the *critical/social* orientation, the relationship between schools and the structure of society becomes central. Attention is drawn to the moral obligations of teachers to include all members of society, regardless of age, gender, race, religion, skill level, or socioeconomic level.

Michael Metzler and Bonnie Tjeerdsma (2000) suggest that teacher educators have a responsibility to assess the effectiveness of what they do, with whatever model or conceptual orientation is selected. They suggest that few teacher educators have spent much effort doing this type of assessment. In an effort to be of assistance, Metzler and Tjeerdsma provide a variety of tools for assessing and improving program delivery.

Daryl Siedentop and Larry Locke provided an alternative perspective on assessing PETE programs in 1997. They describe the minimum conditions necessary for the effective operation of a PETE program, and also suggest that the responsibility of PETE programs goes beyond educating new recruits and includes a duty to "create and sustain good school programs" (p. 27). These authors go on to lament that few PETE faculty have assumed any responsibility for the quality of programs in schools, instead adopting an "us" (e.g., faculty in higher education) versus "them" (e.g., teachers in the K–12 schools) mentality. The outcome of this adversarial relationship has been a declining level of competent program delivery, with national health-

related consequences. In 1990 John Goodlad identified a similar concern when he suggested that the reform or renewal of schools, teachers, and teacher preparation programs has to occur simultaneously.

In-Service and Staff Development

Most states require some sort of ongoing accumulation of continuing education credits for teachers to retain their licensure. Most school districts create opportunities for continuing education related to topics relevant to the purposes of schools and needs of students in their community. Unfortunately, these opportunities are often too generic to address the specific needs of physical educators, and are often perceived to be ineffective.

Beyond state and school district requirements, there is a key challenge for licensure programs: convincing graduates that their preparation to become true professionals has not ended, but has just begun. Without an internal commitment to ongoing professional growth, few in-service or staff development efforts are effective at eliciting change. Indeed, although specific examples of successful change efforts can be cited, Linda Bain (1990) describes practice in physical education as "generally resistant to change"(p. 771).

Michael Eraut (1987) describes four approaches to in-service education that can be used to categorize some of the work in physical education. The *defect* approach involves behavioral training to build skills that teachers lack. In physical education, targets of this approach have included different verbal behaviors (e.g., feedback, prompts, questions, use of student names, etc.), teacher movement, task selection, and others. The *growth* approach is about helping teachers seek greater fulfillment, rather than helping them simply become competent. In physical education, this approach is difficult to distinguish from the *problem-solving* approach, where efforts are made to help teachers diagnose problems in their own instructional setting. Program research from places like Teachers College at Columbia University and the University of Massachusetts would be examples of this kind of in-service program. Lastly, the *change* paradigm involves efforts to make changes in programs that are responsive to greater societal needs. Attention to gender equity, mainstreaming, and nondiscrimination would be examples of this work in physical education.

Trends and Controversies

The most critical concern facing physical educators in the United States is the viability of physical education programs as a required subject in schools. As opportunities for advanced placement courses; electives in art, music, and foreign languages; and other varied courses have occurred, time in the required curriculum for physical education has declined. There are consequences to this on at least two levels. First, the health of the nation is at risk when the most equitable delivery system for ensuring active lifestyles is curtailed. Second, there is a declining need for teacher education programs when there are fewer teaching positions available for program graduates.

Related to the time available for physical education programs in schools is an ongoing debate over the most appropriate content for programs. In some states (e.g., West Virginia and Florida) there is a major emphasis on student performance on fitness tests as an indication of physical education program effectiveness. In other states (e.g., Missouri) there is more of an emphasis on the demonstration of written competence in health-related fitness knowledge. In at least one other approach (South Carolina), there is an attempt to hold teachers accountable for fitness

levels and fitness knowledge, as well as out of-class behaviors and movement competence. There are obvious implications for teacher preparation programs in each of these states with respect to what will be expected of program graduates. It is also worth noting that none of these approaches is an exact match with NASPE guidelines.

Part of the debate over appropriate content for teacher preparation can be traced back to a classic 1964 work by Franklin Henry, where physical education was first conceptualized as an academic discipline in the United States. For the first time, the study of human movement spawned viable areas of study, leading to degrees and careers other than teaching. Today, locating departments of physical education in colleges and universities is a challenge, partly because such departments can go by so many different names: 114 have been counted by P. Stanley Brassie and Jack Razor, including Biomechanics, Kinesiological Studies, Kinesiology, Sport Science, and Sport Studies, to cite just a few. Approximately half of these departments are in colleges of education, while others are in colleges of liberal arts, applied sciences, health, or elsewhere. This identity crisis has lead to marginal status for physical educators at all levels.

A common trend in teacher preparation programs is for early and frequent field-based experiences for students. The challenge is to find (or create) placements where desirable practices are being modeled. An additional challenge is to determine the amount and type of training required to prepare school-based supervisors.

The last major controversy that warrants mention in teacher preparation involves determining the most appropriate level for initial licensure. In some institutions (e.g., the Ohio State University), initial licensure in physical education is only available at the graduate level. In other schools (e.g., University of South Carolina), initial licensure is available at both the undergraduate and graduate level. In most of the rest of the country, initial licensure is predominantly delivered at the undergraduate level. There is no definitive evidence on which (if any) of these approaches is the most appropriate way to prepare physical education teachers.

The beginnings of organized PE in the USA were connected with the German gymnasts (Turners), the activities of whom were first introduced by Charles Beck at the Round Hill School in 1826 (Lumpkin, 2004). His followers were Charles Follen and Francis Lieber (Siedentop, 2006; Vlček, 2009a). Gymnastics clubs were founded in a number of cities including New York, Pittsburg, Baltimore, Milwaukee, Louisville, and Chicago. After the end of the Civil War in 1865, the German Turners became very popular in the USA. In 1886 there were 231 clubs with twenty-four thousand members across the country (Kössl, Krátký, & Marek, 1986). Another approach to PE was introduced by Catharine Beecher. Her popular Physiology and Calisthenics for schools and families (1856) included chapters on the circulatory and other systems of the body and provided a description of schoolroom exercises for girls and boys (Stillwell & Willgoose, 2006). Other systems, such as the Swedish one and that of Lewis, Delsartian, Hitchcock, and Sargent, had their patrons as well. These programmes became the prominent physical education system in the United States in what became known as the “Battle of the systems” (Siedentop, 2006). However, none of these systems prevailed. Instead, a unique American system emerged as traditional education was challenged by John Dewey and his colleagues (Cazers & Miller, 2000). Proponents of progressive education were emphasizing the importance of play and games in psychosocial as well as physical development (Singule, 1991). Nineteenth century Protestant evangelism was another root of the belief that sports and games build character (Clifford, 2001). Here, the Young Men’s Christian Association, or YMCA, played a critical role. The YMCA began in London in 1844. The

Young Women's Christian Association or YWCA was founded in 1894. As originally conceptualized, the YMCA and YWCA encouraged Bible studies rather than exercise. However, when the organizations started opening chapters in the United States and Canada, its leaders found that Bible study classes did not attract as many young men and women as the gymnasiums of the Swiss and German gymnastic clubs. Consequently, many YMCA and YWCA buildings built after 1880 included weight rooms, gymnasiums, and swimming pools. As a result of the popularity of the YMCA and YWCA, the philosophy of pragmatism and the modern Olympic movement, games, sports, and dance increasingly replaced formal gymnastic/calisthenic systems at the beginning of the 20th century (Brettschneider, Brandl-Bredenbeck, & Rees, 1997). Surprisingly, many Americans were not physically fi t for military service during World War I, and there were many post war eff orts to implement physical education at all levels of schooling (Massengale, John, & Swanson, 1997). During World War II, physical fi tness was again required of soldiers, but it was also required of many others, particularly women, since the war eff ort required manual labour. Soldiers once again lacked in suffi cient physical fi tness to fulfi l requirements (Kelly & Melograno, 2004), so after the war, schools instituted more rigorous PE requirements, and there was a greater interest in teaching physical education. By the 1950's, there were over 400 colleges and universities in the USA off ering majors in physical education and there was increasing recognition of the scientifi c foundation of PE. But the fi tness of the army in the Korean War fell short of expectations again (Kelly & Melograno, 2004). Hence, the federal government set up the President's Council on physical fi tness, which was supposed to raise fi tness standards in schools across the country. Yet, the series of recessions in the 1970's and the 1980's brought about cutbacks in many school programmes, including physical education (Lumpkin, 2004). By the end of the 1970's, interest in the President's Council had waned and physical education courses began to emphasize lifetime sports (Zeigler, 2005). The American public spontaneously developed an intense interest in fi tness in the late 1970's. School programmes were dominated by curricular innovations such as: movement education, adventure education, cooperative games, activities for girls and persons with disabilities. One of the most signifi cant shifts of the 1970's was the Title IX amendment to the Federal education act, which stipulated that all federally funded education programs could not discriminate on the basis of gender (Lumpkin, 2004). Enforcement of Title IX opened up many new opportunities for women in competitive athletics, both at the high school and collegiate levels. In a continuation of the trends of the 1980's, during the 1990's many school districts have limited the amount of time students spend in physical education classes or have even dropped the program in response to economic problems or concerns about a poor quality of the curriculum. Since 1983, American education has been in a period of educational reforms (Kelly & Melograno, 2004; Hendl & Vindušková, 2004; Jelínková, 1993). One promising step concerning the future of physical education was publication of the National Standards for Physical Education (NASPE, 2004). This document establishes content standards for the physical education school programme that clearly concentrates on "movement" education emphasizing the life long physical activity of the population (Dobrý & Hendl, 2006; Kelly & Melograno, 2004).

5.1.3 Comparative study of professional preparation in physical education of India with Russia

Russia offers education in such realms as: Physical Culture; Organization and Management in Tourism and Sport and Recreational Activities; Vocational Education in Physical Culture and Sport; Recreation and Sport Tourism; High Performance Sport; Physical Education for Disabled Persons (Adaptive Physical Education); Health and Fitness Technology, etc. To study, you can choose a geographically comfortable university: National Research Tomsk State University; IKBFU (Kaliningrad); UrFU (Ekaterinburg); University of Tyumen; Lobachevsky University (Nizhny Novgorod), etc.

The Department of Physical Education in 1967

The first steps to self-arranged physical training among students originated at Kazan Imperial University. There were horse riding, fencing and dance classes in the University's curriculum.

In the early 20th century some amateurs exercised with bars and weights in a small room of the University's library.

At first the University did not have its own sports facilities except the sports hall in the main building, originally the Church of the Exaltation of the Holy Cross, and today the Museum of History of Kazan University. In 1840 the University got its own swimming places on the shores of the Kaban Lake in the city center. After 1929 the University's students exercised at the military arts division. The Department of Physical Education was established only in 1935.

In the early 1930s physical education was optional for students: they had a choice of doing gymnastics, playing lapta (a kind of a Russian ball game), rafting down the Volga. In 1935 physical education classes became obligatory and students started attending the classes according to the schedule.

V. Bekasov, who had graduated from the Military gymnastic school, was the first Head of the Department. He was a universal sportsman, multiple champion of the freestyle wrestling, swimming, athletics and cross-country skiing. At that time the Department was only gaining the experience and the main goal was simply physical training.

Then the World War II began and many teachers, coaches and students were off at the military front. Five years later the battle-hardened people came back to the University.

New records and sport victories resume the pride of the Department of Physical Education of Kazan University.

The voluntary sports society "Burevestnik", headed the sporting activities in higher education institutions and brought up many famous specialists. Mainly it resulted from the fact that only the professionals were working at the Department - the coaches of Russian class: D. Vashsh, V. Zhitlov (fencing), L. Arslanov, I. Poznyak (basketball), Kh. Murtazin (athletics). The teaching staff was very experienced: V. Mikhnevsky (athletics), V. Togulev (the Sports Club Chairman), A. Kashin (gymnastics), V. Kagan (the Head of the Teaching Subdepartment), Yu. Kozlov (ski sports), V. Shadrin (the Head of the Department)

The Candidate (V. Shadrin, A. Kashin) and Doctor of Science dissertations (N. Peysakhov, A. Prokhorov) were prepared and defended based on the research findings.

In 1958 the annex was built on to the main building. On 14 November 1958 the new sports hall was officially opened and the first Tatarstan artistic gymnastics championship took place there. That very day the sports hall in the Bauman Street was opened and the weight lifting championship of the main board of the all-union voluntary sports society "Burevestnik" took place there. Professor Mikhail Nuzhin, the Rector of the University, welcomed the competitor's parade.

In the spring 1959 volleyball and basketball courts and the athletics center were built in the University's yard. Moreover, the sports club and sports and health camp "Cordon" were opened and the University's water ski base was built up on the Kazanka river.

In the 70s the scientific laboratory on the problem of the psychophysiology of the individual differences in sports and study was successfully working at the Department.

In 1989 the multipurpose Cultural and Sports Center UNICS where the best conditions for sports activities in the country were provided at that time.

Today the studies and trainings are held in 10 halls of UNICS. There are halls N1 and N2 for soccer, basketball and volleyball. There is also a climbing wall in the hall №2 that is the first one in Russia. The halls N3,4,5,6 are aimed at shaping, aerobics and modern dances. In the hall №7 students work at strength training, kettlebell lifting and play table tennis. Track and field students train on the track in the hall N8. The halls N 9 and 10 are aimed at bodybuilding sessions. In 2009 the Chess club was revived in UNICS (the office 502 on the 5th floor). Students can use showers and sauna to regain strength after the sports activities. There is also a health center on the first floor. In summer season students can strengthen their health in the students sports and health camp "Cordon" that is situated on the picturesque shore of the Volga in 30 km (3 281 ft) from Kazan. The total area of the camp is 4 ha (107639 ft2). This summer camp can host 200 people for one session. As a result, 800 students can enjoy their holidays in the camp during 4 summer sessions.

There are 5 single story buildings made of wood and concrete within the territory of the camp. Every building includes 8 rooms for 3-4 people in each room. Campers use following services: football field, basketball court, volleyball and badminton court, covered pavilion (36x12m) for table tennis, covered sports court with wood floor (36x18m) for playing volleyball, handball, tennis and also for holding cultural events. These facilities made it possible to teach classes in 23 different kinds of sport.

The Department of Physical Education developed alongside with University's infrastructure evolvement.

According to the order of the Ministry of Education and Science of the Russian Federation (N156, 2nd February, 2011) signed by the Minister Andrei Fursenko, it was decided to merge Kazan (Volga Region) Federal University with Tatar State University of Humanities and Education, Kazan State Finance and Economics Institute and Yelabuga State Pedagogical University. Since 1 September, 2012 the new structural subdivision – the University Department of Physical Education, which consists of the faculty of the Departments of Physical Education of reorganized Tatar State University of Humanities and Education and Kazan State Finance and Economics Institute, was founded on base of the KFU Department of Physical Education.

The longstanding history of the Departments of Physical Education of attached Universities is also famous for their names and events. By the moment of the merge, the Department of Physical Education of the Tatar State University of Humanities and Education had celebrated its 80th anniversary and Kazan State Finance and Economics Institute's department had celebrated its 50th anniversary.

Thus, since 1 September, 2012 the new stage in the development of the KFU Department of Physical Education has begun. The Department's sports facilities have notably expanded. Today they include UNICS, Sports Complexes Bustan and Moskva, Social and Sports Complex Orenburgsky trakt 10 and sports hall in Butlerova street 4.

Due to concerted effort of the staff the Department work has improved in all directions: new scientific and research directions were identified, publishing activity has increased, and the amount of educational, sports and health events has also grown.

“In the late 80s there was research on a comprehensive model o teacher personality, a new emphasis on psychological testing of enrollees of pedagogical institutions. In particular, such research was conducted at Kazan Pedagogical Institute.”

“The 90s became truly transformative for the Russian educational system – processes of economic, political and social reform warranted the reshaping of educational approaches in ideological, methodological and conceptual aspects.”

Three stages of post-Soviet development of teacher education are mentioned in the article. Dr. Valeeva said this about the latest which started in 2013 – 2014, “Many pedagogical universities have been closed or merged with classical universities. The latter always provided fundamental knowledge, whereas the former were strong in practice-oriented studies. A new balance should have been found in these circumstances, which in the case of Kazan University proved to be feasible.”

“A unique structure of teacher education was formed at KFU, where advantages of specialized and classical universities were combined to create variable study trajectories for future teachers, namely, traditional, distributed, and integrated programs.”

The influence of globalization has created some similarities in the very different educational systems of Russia and the UK.

“The more visible traits of similarity are in the decisions to create specific standards of teacher education. Both Russia and England aspire to do just that.”, said our interviewee.

As an external observer, Professor Menter noted the comparatively bigger attention to psychological aspects in Russian teacher education. This can be seen at KFU as well. He opined that the integration of pedagogics and psychology is rather efficient.

In 1998-1999 teachers were trained at 670 educational institutions, including 81 pedagogical universities and institutes, 61 classical universities, 22 other VUZs, 183 pedagogical colleges, 163 pedagogical secondary schools, as well as 96 institutions of advanced training and professional retraining. The number of teachers employed in secondary education exceeded 2,000,000. Out of 1,700,000 teachers working at state schools, 75 percent had a higher education. The share of teachers with specialized secondary education was 23.0 percent in general secondary education and 72.5 percent in preschools.

5.1.4 Comparative study of professional preparation in physical education of India with Germany

GutsMuths and Jahn gymnastics

The first roots of German physical education were marked by the publication of J. C. F. GutsMuths' book *Gymnastics for Youth* in 1793. Translated versions of this book soon came to have widespread significance as a stimulus for the practice of physical education within school curricula in other European countries such as Denmark and Sweden. A distinct influence on GuthsMuths were his studies at the University of Halle, where A. H. Wolff was elected as the first German Professor of Pedagogy, a new type of science separated from religious studies. However, the influences on GutsMuths were not uniquely German. Other determinants included the work of several French physicians, but especially the educational philosophy embedded in naturalism and drawn from the gymnastic exercises of Ancient Greece and pedagogue Jean-Jacques Rousseau. The assimilation process and the formulation of a

collection of gymnastic exercises with running, jumping, playing, swimming, etc., were assisted by the various contributions of GutsMuths' European students emanating from Austria, France, Denmark, Hungary and Portugal amongst other countries. Thus GutsMuths' 'system' of physical education was the culmination of an assimilation of pan-European ideas, requested vocational qualifications and implemented practices during his professional career in the Philanthropium at Schnepfenthal in the 1780s (see GutsMuths 1793).

After the experiences acquired in teaching at the Schnepfenthal Philanthropium, GutsMuths tried to persuade the authorities to incorporate his form of gymnastics into the Prussian school system after 1805. The attempt was subsequently supported by the likes of officers such as Hardenberg, von Humboldt, Siivern and Schulze in the Military Department and the Department of Education, who promoted 'gymnastics' as a subject within the new syllabus of the Prussian Education Reform Act from 1809 onwards. However, at about this time F. L. Jahn, a teacher in the city of Berlin, began (in 1811) to develop his more patriotic system of German gymnastics *(Turnen)* with students on the open area of the Berlin suburb, the Hasenheide grounds *(Turnplatz),* which quickly superseded GutsMuths' gymnastics in popularity. Jahn borrowed many of his gymnastic exercises from GutsMuths' collection, but the underlying purpose and intention of the exercises and his supporters (e.g. Friesen, Beck and Follen) was linked with nationalistic notions of unifying the different German states and liberating them from French occupation by Napoleon (see Jahn and Eiselen 1816).

The Jahn 'gymnastic' model for school physical education received support from politicians between 1810 and 1820. Jahn himself was critically reluctant to have his system of 'folk' (or 'popular') gymnastics included within regular school education, because the ideal of social attitudes developed by gymnastic exercises did not fit into the frame of the rigorously controlled hierarchical Prussian education system. Conflict with Prussian State officials exacerbated by the assassination of one of their members by a student linked with the *Turner* movement brought closure of the gymnastics grounds and an associated ban (the so-called 'Ban on *Turned)* on Jahn's gymnastics from 1820 to 1842. In practice the ban was gradually lifted in the late 1830s when the Prussian Ministry of Education was alerted to publicly reported health problems amongst school children. Gymnastic exercises have been regarded as an appropriate form of health promotion intervention since that time in German physical education history. The political uncertainties of the times persuaded the Ministry of War to give strong support to the Prussian Ministry of Education's Bill (1844) to promote physical education in schools, and saw the beginnings of Swedish influences on developments in physical education. Two military officers, Major Rothstein and Lieutenant Techow, were sent to study for a couple of months at the Royal Gymnastic Institute of Stockholm (1844-5). Rothstein became a strong supporter of the Swedish *Ling* system, which he recommended to the Prussian Ministries after his visit. In late 1847 the first gymnastic course for military personnel started in the newly founded Central Gymnastic Institute in Berlin. Rothstein was elected as Director and he himself taught the *Ling* form of gymnastics to his military students. Although the first course suffered because of the bourgeois revolution of 1848, in which Jahn supporters were involved, it signalled the beginning of training physical educators within the military system (Grossbrohmer 1994).

Lingian Swedish influence

A clear Swedish phase can be discerned between 1851 and 1863 when the Central Gymnastic Institute was under the direction of Rothstein. In 1851 the Prussian Central Gymnastics Institute also allowed entry for non-military students, and the Institute was divided into two departments, one for future officers in the military branch and one for future gymnastic teachers in schools in the civil service department. Rothstein headed the two departments. Kluge and Kawerau, both of whom were heavily involved in the Berlin Club of Gymnastics Teachers, which offered vigorous support to the new system of school gymnastics developed by Spiess, tutored the civilians. Spiess, German born, first studied Pestalozzi's elementary system of gymnastics in the 1830s and later taught his system, based on Pestalozzian methods, in the early 1840s in the Swiss city of Basel. At the time of the immediate end of the Jahn period and when the Ministry of War sent Rothstein to Stockholm, the Prussian Ministry of Education consulted with Spiess over the re-introduction of gymnastics in Prussian schools. At the Central Institute, somewhat contrary to Rothstein's views, Kluge and Kawerau became advocates of the Spiess system, which included traditional Jahn gymnastic exercises, particularly apparatus work on horizontal and parallel bars. In fact, the gymnastic training for the 'civilian' students given by Kluge and Kawerau was more similar to the Spiess system than to the officially approved Swedish system of Rothstein. When Rothstein banned horizontal and parallel bars from class instruction because these pieces of apparatus were excluded from the system of Swedish gymnastics, a clash of the respective ideologies of Swedish and German gymnastics arose - the so-called 'Quarrel of the parallel bars'. For Rothstein, horizontal and parallel bars were not conducive to health promotion in gymnastic exercises, but for the likes of Kluge and Kawerau, the foreign, unpatriotic Swedish system was inappropriate for the education of physically good and mentally strong German gymnastic teachers. The Berlin Club of Gymnastics Teachers challenged Rothstein by inaugurating a medical evaluation of the quality of the two gymnastic systems in health promotion. The clash became a political issue with discussion in the Prussian parliament. Finally, esteemed physicians and members of Parliament, like Virchow, criticised the Swedish system and recommended the German gymnastic apparatus as a necessary element in training German gymnastics teachers. In 1863 Rothstein vacated his position as Head of the Berlin Central Gymnastic Institute. Five years later, when the second Prussian physical education curriculum for folk schools was published, exercises on horizontal and parallel bars were included. Previously in the first Prussian syllabus of *Turnen* (1862), prescribed by the Prussian Act of 1860 to be delivered regularly for two hours per week in boys' schools, these had been ignored under Rothstein's rule. After the initial clash of German and Swedish gymnastics ideologies in Germany, the *Ling* system decreased in importance over a period of about ten years, to be generally replaced by the Swiss-German admixture developed earlier by Spiess. The Spiess system, which gained prominence in all German states between 1870 and 1914, comprised three parts: exercises to order like marching, free exercises of arms and legs, and apparatus exercises on horizontal and parallel hars. However, even as the system hecame standard in the training of gymnastics teachers in many German states, the waves of English games and sports were already approaching German schools (Grossbröhmer 1994).

The impact of English games and sports

English sports like rowing were already known in German cities such as Hamburg and Frankfurt as early as the 1830s and 1840s. Two groups were primarily responsible for introducing English sport into Germany: English-born traders, businessmen and their sons, who lived in commercial centres such as Hamburg, Bremen and Hanover; and German-born intellectuals, philologists and grammar school teachers, who had spent some time in England improving their English language skills and who became acquainted with English culture and lifestyle practices in the 1850s and 1860s. A German translation (1859) of Hughes' *Tom Brown's Schooldays* brought the essence and flavour of reformed English public school education, with its emphasis on organised sporting activity in which games (and particularly football) had an important role to play, to a wider audience. German grammar school teacher advocates of gymnastic exercises were deeply impressed by the cult of 'athleticism' and ideas on 'muscular Christianity' during their visits to English public schools. The perception was that the English type of physical activity (athletics, football and rowing), pleased the English boys much more than the ordered drills and free-standing exercise of arms and legs experienced by their German counterparts. By the 1870s, despite the efforts of some grammar school teachers to supplement the now widespread Spiess gymnastic system by re-introducing the former *'Turner-games'*, the activities had little appeal for young German grammar school pupils, who were not too well disposed to participate in what they essentially regarded as mere running events. Such lack of interest in traditional Jahn *Turner-games* prompted Brunswick gymnastic teachers August Hermann and Karl Koch to introduce their pupils to football after Hermann had visited a number of English public schools and returned to Germany with a ball at the time a rarely seen item of games equipment in the country. In 1874 football was included in the physical education curriculum at the famous Brunswick public grammar school, the Martino-Catharineum. After 1878 all classes at the school had to participate in a weekly 'games afternoon', in which cricket also featured. The German gymnastics teachers' increasing antagonism towards the lack of regular games in physical education in grammar schools gained wider support from German colleagues for the initiatives taken by Hermann and Koch (Hamer 1989). In 1882 von Gossler, the Prussian Minister of Education in Berlin, sponsored a Bill to promote outdoor gymnastics lessons, rather than indoor ones in small gymnasia, with more vigorous support for rambling and *Turner-games* as physical education activities and football were included as a supplement to afternoon gymnastics lessons. The 1882 Act, the Games Act, officially recognised that games should be compulsorily taught outdoors at least every two weeks during gymnastics lessons on Wednesday and Saturday afternoons. Von Gossler decreed that the 'games afternoon' should be taught outdoors rather than in the gym, to improve health. From 1883 onwards, local head teachers were obliged to provide games lessons every fortnight. In many German grammar schools during the 1880s, *Turner* activities such as running events, stickball and English football featured regularly in physical education programmes. This, however, was not the case in folk schools, especially in Prussia, where lack of resources (space and equipment) inhibited even Spiess-method gymnastic exercises (Jonischeit 2000).

Rowing became popular from the late 1880s in Germany's grammar schools. Student self-governance was much in evidence in the school-based rowing clubs. Generally, many head teachers and other grammar school staff supported games and other sports, including rowing, because of their over-riding educational purpose as a form of 'preventive social medicine' to socialise students away from imitating the depredations of young university students, whose lifestyles were epitomised by tobacco smoking, excessive beer drinking and amoral social habits, then perceived to be characteristics of a 'strong German'. In spite of support from the Prussian Ministry of Education, in 1892 the 'games afternoon' became optional for all grammar schools. It was to be a non-governmental organisation which would become the real advocate for English games and sport for German school children (Eisenberg 1999).

The German Gymnastic Federation *(Deutsche Turnerschaft)* was founded in 1868. The first national sports association on German soil, the German Rowing Association, was founded in 1883, and was soon followed by the German Swimming Association (1886), and the first German Football and Rugby Association (1890), which after a decline in membership was reestablished as the German Football Association in 1900. In 1902 the German Lawn Tennis Association was established. The last two decades of the nineteenth century were of great importance in the establishment of sport clubs, in the development of the first networks of regional and later national sports associations, and in bringing sports and games into the frame of school-based physical education. One national umbrella association became the leading institution in promoting English sports and games in Germany, inside and outside the school systems - The Central Association for the Promotion of Folk and Youth Games *(Zentralausschuß zur Förderung der Volks- und Jugendspiele).* The Association was founded in Berlin in 1891 and immediately started to promote English games and sports throughout Germany. Advocates, officers, and teachers like Hermann and Koch served on its executive board. The Association organized numerous short-term internships for gymnastics teachers in many urban locations over the next twenty years. Instruction books and booklets with the rules of games like tennis, cricket, football and many traditional German games (such as stickball) were distributed to schools and teachers free of charge. In this way Prussian federal and regional school authorities spent less money on fostering games education in grammar schools, leaving some local city school boards, and in particular the Central Association, as the only real promoters of the English games movement in Germany from the 1890s up to the outbreak of World War I (Jonischeit 2000).

Common ground was shared by the Central Association and the German Gymnastic Federation in opposing Pierre de Coubertin's and the Greek representatives' invitation for Germany to participate in the first modern Olympic Games in Athens in 1896. It was an individual, Willibald Gebhardt, supported by the court of the German Emperor, who arranged Germany's participation in the Games. In 1904 Gebhardt, together with some of his former Central Association adversaries, founded the first German standing Olympic committee, the German Reich's Council for the Olympic Games, which existed until 1917 when Carl Diem changed its name to the German Reich's Council of Physical Activity, under the premise that he and other members could not envisage any German participation in the Olympic movement after the end of World War I. As a national equivalent, the German Combat Games were

celebrated in the 1920s and 1930s, and the Reich's Council continued to function as a national sports council, representing the different German sports associations until the beginning of the Nazi period in 1933 (see NOK 1999).

Meanwhile, the German Gymnastic Federation remained antagonistic towards 'English' sport and was joined by German gymnastics teachers, who were strongly opposed to any English kind of physical education. The British concept of sportsmanship, striving for excellence and record performance in any one physical activity, was altogether different from the attitudinal spirit embraced by German gymnastics. Football, for example, was criticised as a typical 'English disease'. Kicking a ball was like kicking a dog in the rear in the view of many *Turners;* it was not perceived as the kind of bodily exercise which readily fitted into the spirit of good posture which was a favoured feature of German gymnastic exercises. Indeed, between 1911 and 1914, there was some decrease in English games and sports in German schools. Football was never unanimously accepted by teachers because of the 'wild, rough uncontrolled activities', which sometimes led to injuries, for which teachers were privately made responsible by parents. Another reason why teachers remained reluctant to develop the game of football relates to the state authorities' refusal to pay any insurance fees for their teachers whilst teaching at school. Although many student-organised football clubs existed in grammar schools around 1900, the decline of football in schools continued up to 1914 (Naul *et al.* 2000).

German gymnastics teachers were not trained in games (and particularly not in English sports) at the Prussian Central Institute for Training Gymnastics Teachers in Berlin before 1908. The adoption of English games and other sports in German grammar schools was more or less a private initiative of anglophile teachers, supported by the non-governmental lobby, the Central Association for the Promotion of Folk and Youth Games, and some city school authorities, which either rented playing fields or financed the provision of playgrounds at newly founded local schools. The Prussian school authorities did not financially support this movement, but rather remained as a subsidiary partner for non-governmental activities. The relationship between state education authorities and the Central Association was good: teachers who wished to undertake further education course units provided by the Central Association for games teaching training could officially do so, but incurred expenses were not reimbursed. Without the independent efforts of the Association, none of the many boys and girls in German folk schools, to which about 95 per cent of all students belonged at the turn of century, would have had the opportunity to be involved in organised games afternoons during their school career. Prussian education authorities, because of their perceived propensity to prepare future German gentlemen and officers, supported English amateur sports.

Spiess German gymnastics and Swedish gymnastics

Before the end of the nineteenth century, it was already clear that English imports were supplementing the classical Spiess type of gymnastics in German grammar schools. Students enjoyed athletics, football, rowing and tennis as alternative physical activities to German gymnastics. Frequently the third gymnastics lesson per week, which became compulsory in Prussian schools in 1892, was used in many grammar schools as a 'games lesson', even though official curriculum policy dedicated this additional lesson to German gymnastics. German gymnastics on Spiess lines was under pressure. Representatives of the German Gymnastic

Federation were aware of the implementation of games and sports in grammar schools, and as a patriotic alternative they tried to revive the 'sacred cow' of the former *Turner-games* with the inclusion of 'stickball' within the school physical education programme: GutsMuths' and Jahn's traditional activities were not to be replaced by the English game of football! However, the games and sport movement was not the only challenge to German gymnastics in schools. After 1900 there were increasing reports of new developments in Swedish gymnastics *(Torngren)* and the Danish (Knudsen) interpretation of Swedish gymnastics in the monthly journal, *Turnwesen.* The leading German physician, F. A. Schmidt, at that time a member of the executive board of the German Gymnastics Federation as well as of the Central Association for Promoting Folk and Youth Games, undertook a short study visit to Stockholm in 1899-1900. During this fact-finding tour, he observed Swedish gymnastics teaching at the Royal Central Gymnastics Institute in Stockholm, just as Rothstein had done some sixty years earlier. Schmidt also observed gymnastics teaching in Stockholm's folk schools. His short visit left him deeply impressed with the Swedish system from a physiological point of view. On his return to Bonn, he wrote a couple of articles about the new Swedish gymnastic system together with a book about his visit. The publications highlighted the physiological benefits of Swedish posture exercises and the use of Swedish gymnastic apparatus like the beam and the box. As a medical authority and an executive board member of the German Gymnastic Federation, Schmidt's recommendation of Swedish exercises as a supplement to German gymnastics was not regarded as unpatriotic. The door was now open for other gymnastics teachers to reform the old Spiess system, not only through sport and games but also by new forms of gymnastics (see Schmidt 1912).

Reform of German gymnastics commenced around 1904-5, when gymnasts met at three conferences, the so-called 'Hamburg art education days', at which Schmidt was an invited speaker. In 1909 the Prussian Ministry of Education passed a new Act on 'Gymnastics for schools without a gymnasium'. Then for the first time modern Swedish posture exercises were introduced in a state physical education curriculum in Germany. Whilst the traditional Spiess system of order-based, free- and apparatus exercises as the form of physical education in folk and grammar schools still dominated the structure of the curriculum prior to World War I, athletics and sports together with Swedish posture exercises already supplemented the 'German system'. Without these European influences before the War, the decline of the traditional Spiess system would have been less rapid in the early 1920s.

'Natural gymnastics* and the spirit of competition

At the end of the 'Great War' in 1918, political revolution ushered in the social democrats, who were responsible for the constitution of Germany's First Republic (the Weimar Republic). Reforms of the education system were considered and changes made. Physical education attracted interest from groups with different motives. Liberal groups of reformers and educationalists wanted to promote new 'natural' methods in school physical education for its new status as an integral part of general education and its role in developing the mentally and physically (i.e. harmoniously) developed individual. On the other hand, some more right-wing orientated *Turners,* sportsmen, and politicians supported school physical education as a counter to the prohibition of any military training for young Germans according to the Treaty of

Versailles. From the outset of the Weimar Republic, therefore, school physical education was dually entwined with new educational purposes and curriculum initiatives, and with traditional, more law-and-order orientated, disciplinary and gymnastic exercises to offset the loss of military service (Naul *et al.* 2000).

In 1920 the 'games afternoon' became compulsory for all pupils every fortnight. Sports and games were implemented in folk schools. Examinations in gymnastics and athletics became obligatory in grammar schools at matriculation *(Abitur)* for entry into university-level study. Once again, however, football, seen as one of the new sports of the proletarians, did not gain the support of many grammar-school teachers. *Turner-games* like stickball and fistball dominated games education at school. A new *Turner-game,* field handball, was developed by leading gymnasts and became popular in clubs and at school in games afternoons. It was played 11 *v.* 11 on a football pitch and received the general support of physical education teachers. Field handball now became the true 'German game' for the *Turners.* Exclusion of football from the new Prussian physical education curriculum for grammar- and middle-school boys was discussed in the mid-1920s. Meanwhile, many of the schoolboys played their beloved game in youth teams within one of the now numerous German football clubs.

English-style athletics almost replaced gymnastics during the summer term. The Spiess form of German gymnastics was officially omitted from the new physical education curriculum, but relics were still mixed with 'natural' types of gymnastics in lessons during winter. In primary schools, gymnastics lessons were largely revamped using exercises drawn from 'natural gymnastics', with a child-centred instruction strategy based on the 'Austrian school of gymnastics', developed by Margarete Streicher and Karl Gaulhofer from Vienna. Both scholars and their approach to teaching gymnastics were supported in Germany by such reforming *Turners* as Erich Harte and Fritz Eckhardt. Through the officer, Ottendorf, at the Berlin Ministry of Education, several aspects of Streicher's and Gaulhofer's 'Austrian natural gymnastics' approach were included in the new physical education curriculum for girls in 1926. The reforming gymnast Erich Harte and the traditional *Turner* Edmund Neuendorff both became responsible for the new physical education curriculum for boys, published in 1925 (Gessmann 1987). Whereas Harte promoted the Austrian system of his friends Streicher and Gaulhofer, Neuendorff preferred the new 'Bukh approach' of the Danish system. However, Neuendorff put together elements of athletics, traditional German apparatus work, and the Danish type of more physiological-functional floor exercises into one new curriculum area, 'competitive gymnastics'. Competitive gymnastics according to Neuendorff was a mixture of German-English-Danish styled physical education elements, which were not regarded, especially by Gaulhofer, as systematic. What was clear, however, was that whilst the elements did not sit comfortably together as one system, the spirit of competition to achieve personal records, excellent postures and a shaped body was pervasive (see Gaulhofer and Streicher 1922; Neuendorff 1927).

Body shape, linked with Bukh's gymnastics, was viewed as a basic performance level for training athletics and apparatus gymnastics. Neuendorff and Harte replaced the classical tripartite structure of the Spiess system with a new structure: 'body training', which in the main encompassed various types of running and Bukh gymnastics; 'competitive gymnastics' with athletics and apparatus work; and games, including the German games of stickball, field handball and fistball. Swimming and rambling were also included, with both playing an important role as outdoor activities in school-based physical education in the 1920s. Nonetheless, there was also a strong resurgence of patriotism in the late 1920s and early 1930s, which resulted in military preparation within physical education before Adolf Hitler and the National Socialists (Nazis) came to power in 1933. Edmund Neuendorff, responsible at the turn of the 1920s for physical education teacher training in Berlin, became a fervent supporter of the patriotic resurgence, with marching securing an important place alongside rambling.

Aryan body training and political physical education

Adolf Hitler had already pointed out in his book *Mein Kampf* (1924) the purpose of Nazi-ruled physical education: a German boy should become as strong and stainless as Krupp manufactured steel, as durable as leather and as quick as a whippet. But before the education system was changed from what was considered to be an inferior training of the mind to the strong physical education of the body, all sports organisations were placed under the political control of the newly elected Reich Sports Leader, Hans von Tschammer und Osten. Federal sports associations (e.g. those for gymnastics, athletics and football) lost their independence and had to join the newly founded German National Socialist Reichsbund of Physical Activities. All sports organisations which were linked in any way with political parties other than Hitler's National Socialist German Workers' Party (NSDAP) or Church sports organisations were legally obliged to close down. The Hitler Youth organisation and paramilitary Nazi organisations like the SA ('Assault division') and SS ('Defence squadron') became the new leading organisations for training the young Aryan body ready to serve 'his leader Adolf Hitler' (see Bernett 1966; 1983).

School-based physical education became less important for the Nazi authorities when compared with their efforts to train young Germans in the Hitler Youth organisation and special Nazi-elite schools (the 'Adolf Hitler Schools'). Nevertheless, physical education became the most important school subject at that time and was strongly controlled by the new Department K (K being the abbreviation of the German term 'body education') of the Ministry of Public Education. In 1934 the third weekly lesson of physical education, discontinued by the Weimarian Ministry of Education a decade earlier due to financial problems, was re-introduced. The third lesson was financed by the Reich Military Ministry, and was dedicated to particular sports: in the lower physical education classes (grades 5-7) swimming; in the middle physical education classes (8-10) football; and for the upper physical education classes (11-12) boxing, which became compulsory for physical education graduation as a prerequisite for obtaining the school general certificate and gaining entry into university. In 1937 a new physical education curriculum was introduced for boys, and lesson allocation was extended to five hours per week. Pupils who failed in physical education were not permitted to continue their studies at grammar schools. Physical education was used to develop a 'hygienic Aryan

race', to foster the 'mentality of a soldier' and to build strong 'leadership qualities'. Techniques, skills, good posture or individual performance were less important. The role to be aspired to was a strong fellow who disregarded risk of physical injury as a challenge for the individual body, who did not fear man-to-man combat as an integral part of the 'national body', and who would pursue whatever his leader, Adolf Hitler, wanted him to do. Engaging in the new German 'combat games' of football and field handball as a team member and fighting individually in the boxing ring at school, together with pre-military exercises in outdoor activities with marching, learning to spy, and to attack and defend in 'war games' in the countryside were the physical activities which dominated the curriculum. A role model for girls' physical education was also established in the Nazi schools, although it was late 1941 before the new syllabus for girls' physical education was published. The girls were educated in new German gymnastics, athletics and field hockey: the strength to bear children dedicated to the *Fiihrer* was as important as the 'beauty of the race' (Bernett 1985).

Building the Aryan body with the spirit of the Nazi ideology was successful in German schools, even though there were a number of problems in delivering the physical education syllabus. Four to five hours of physical education were frequently provided, but it was only possible because classes were combined. Mass exercises ensued from shortages of teachers and the lack of available sports facilities. Physical education immediately declined in the years 1939-40 because many physical education teachers were recruited for military service in the war (Peiffer 1987). In many cities, physical education classes were closed after two or three years of war: gymnasia were used either to house people whose homes had been damaged or destroyed by bombing, or to store food or equipment salvaged after the allied bomb attacks. Many school buildings were also closed, and school children were separated from their parents and sent with their teachers to youth hostels and lodges in Alpine regions to protect them from the frequent bombings at home. Without doubt, physical education in the National Socialist period was implemented in accordance with the Aryan ideology, just as the Berlin Olympic Games of 1936 were utilised to demonstrate the superiority of Germany's 'national body'. However, the ideology of the Aryan body culture inside and outside the school system remained an enduring threat for post-war re-education and democratisation processes in the Federal Republic of Germany, especially in the 1950s when reactionary forces inhibited the renewal of physical education in schools.

German gymnastics systems developed by GutsMuths and Jahn were assimilated in the nineteenth century in other European countries such as Denmark and Sweden (GutsMuths), in the Austro-Hungarian Empire, and in the Netherlands and Belgium (Jahn) by immigrants after the bourgeois revolution of 1848, just as in the case of the United States of America. In the second half of the nineteenth century, however, the concepts of Lingian gymnastics from Sweden and the British games and sports movement supplemented the development of school physical education in Germany. Nevertheless, the rather mechanical German system of Spiess gymnastic excercises overtook all previous forms of gymnastics and new European influences up to World War I. The renewal of gymnastics via the different approaches of natural gymnastics (Austria, Denmark, Sweden) in the 1920s was accompanied by strong support for athletics and games, which finally formed the classic structure of German physical education,

with gymnastics, athletics and games supplemented by swimming and other outdoor activities like rambling.

It is clear that state authorities gave special support for physical education in schools in the different pre-war periods (i.e. after 1900 and after 1933). Pre-military preparation with gymnastics and sports, and later with games and sports, shaped young male German bodies physically and mentally in readiness for each challenge - to serve either the Emperor Wilhelm or the *Fiihrer* Adolf Hitler. There were of course several reform concepts and strategies implemented to teach physical education, but the more sophisticated educational aspirations were subjugated by political agendas and by prominent gymnastics and sports leaders who opened the doors of national gymnastics and sports associations to receive the influence of political instrumentalisation and guidance.

Johann Basedow (1723–1790) was the fi rst person to have conducted gymnastics as a part of education in Germany. He was the fi rst modern writer and teacher of organized gymnastics. He is credited with founding the Dessau Philanthropinum3 and writing about the Education of mind and body (Cazers & Miller, 2000). Guts Muths (1759–1839), one of the originators of gymnastics, wrote various books including gymnastics exercises for girls. For example, he wrote Gymnastics for youth, the fi rst book on modern gymnastics, in which he describes the use of sloping beams, climbing poles, ladders and ropes along with the balancing beam and the swinging beam. Another important person in the history of German physical education who also infl uenced gymnastic leaders in the Czech Republic (Rychtecký & Fialová, 1993) and the USA (Cazers & Miller, 2000) was Friedrich Ludwig Jahn (1778–1852). He was a member of a nineteenth century political and gymnastics movement called the "Turner" movement. He founded the "Turnverein" (a gymnastics club) and established the fi rst public "Turnplatz" (an outdoor area for gymnastics) in Germany in 1811. Physical education was supported in Germany after France defeated the German army in 1806, so the popularity of the Turnverein was useful in opposing the French domination of Germany in the 19th century (Kössl, Krátký, & Marek, 1986). After Napoleon's fall, it began to dissolve as the government thought the "Turners" (members of the Turnverein) were too liberal. In 1818 the "Turner" organization was outlawed and Jahn was arrested. But the members remained loyal. Some emigrated and laid foundations for physical education in many countries including the USA such as Fridrich Hecker, Charles Follen, Charles Beck, Francis Lieber. In Germany, in the 1860's, there was a revival of the organization, but it stayed out of politics (Brettschneider, Brandl-Bredenbeck, & Rees, 1997). Adolph Spiess (1810–1858) (the founder of school gymnastics) utilized the gymnastic ideas of Gutts Muths and Jahn in Switzerland. He formalized Jahn's system for use in schools and helped to add physical education to the German school curriculum. For many years, the Germans presented a barrier to the inclusion of English sports and games in the formal gymnastic oriented PE curricula in Germany. Alternative gymnastic concepts from other countries were accepted at the governmental level earlier than the English sports and games concept. At the end of the 19th century militarism started to emerge in German PE. The familiar ideas of Christian virtue was replaced with the ideology of the Aryan superman (Brettschneider, Brandl-Bredenbeck, & Rees, 1997). Naul (2003, p. 43) points out an interesting fact: "It was only under Fascist rule in the 1930's that stronger support than ever before was given to the sports and games concept." After World War II the process of sport promotion and shaping all elements of physical education with the spirit of sport had begun in the GDR (German Democratic Republic – East Germany) school system (Balz & Neumann, 2005), whereas in West Germany there was a clear gap between the sport clubs and the school physical education system. The West German Sport Federation (DSB) and some state

ministries of education campaigned to bridge this gap after 1966. Hence, the spirit of sport superseded all former physical education aims and objectives in Western and Eastern Germany (Hardman & Naul, 2002). In both countries, the term sport even replaced the term physical education as the subject name (Kurz, 1993). Since the late 1970's, the deconstruction of the sport concept started in West Germany. But the full deconstruction of the sport model emerged in the 1980's, when the so called "student centred" teaching approaches were fostered and two alternative PE concepts appeared: Funke's (1983) "body education" concept, and the critical "Frankfurt group" (1982) concept. The so called "alternative concepts" to sports education became popular in Germany in the 1980's and early 1990's, at primary schools in particular. As a result of the educational reforms that were started after the German reunifi cation in 1990 the sport oriented curriculum was being replaced by movement education. As Richter (2007) points out, NordrheinWestfalen is considered to be the leading state in the movement education approach (Ministerium für Schule, Wissenschaft und Forschung des Landes NordrheinWestfalen, 2001), but there still remains the sport oriented curriculum in some states of the German federation (Brettschneider, 2003).

The previous sections have outlined a number of weaknesses in teacher policy in Germany and the significant challenges that the system faces. We have also identified what we see as substantial strengths and a wide range of promising initiatives. In this section we look to the future and the ways that teaching can become a more satisfying and rewarding profession, and public confidence in schools built up. These two objectives are, of course, closely linked. Teachers are the key resource in schools, and the quality of schooling is critically dependent on ensuring that able people want to enter and remain in teaching – and that they have the working conditions and support to help them achieve their best. We have identified six strategic priorities that could help to orient further policy development. These are (1) the redefinition of the professional profile of the teaching profession, (2) the renewal of initial teacher training and professional development, (3) measures to assure an adequate supply of teachers, (4) the development of teachers' career structure and incentives, (5) the strengthening of evaluation and accountability, and (6) the modernisation of governance and management. In large part these priorities build on developments already underway in different parts of the country, but which have not yet come together into a coherent whole. Society now expects schools to deal effectively with different languages and student backgrounds, to be sensitive to culture and gender issues, to promote tolerance and social cohesion, to effectively respond to disadvantaged students and students with learning or behavioural problems, to use new technologies, and to keep pace with rapidly developing fields of knowledge and approaches to student assessment. Teachers need to be capable of preparing students for a society and an economy in which they will be expected to be self-directed learners, able and motivated to keep learning over a lifetime. These changing expectations of schools and teaching require a re-definition of the professional profile of the teaching profession. This new profile should reflect (1) the increasing heterogeneity of the student population and the greater probability that teachers need to address the needs of students who demand special care because of various handicaps, learning difficulties, social disadvantages or particular capacities in their classroom; (2) the growing stress on the need to provide individualised support for every student and to use new, creative methods that are more efficient in motivating and activating them; and (3) the increasing importance of the school as an organisation, with the stress placed on intensive internal communication and cooperation, participation in collective strategic planning, quality management, selfevaluation and professional development planning. The traditional strength of teaching in Germany has been its focus on teachers' role as subject matter experts. While it is clearly vital that this be retained, it needs to be rounded out and broadened to better capture what being an effective teacher in a modern school actually involves. This necessitates a major

debate at all levels of the education system and throughout the wider society. Germany has a distinct advantage in this regard – it already has wellestablished mechanisms for intensive social dialogue among all interested stakeholders.

5.1.5 Comparative study of professional preparation in physical education of India with Australia

The purpose of this paper is to explore two recurring discourses, the problematisation of an historically common physical education (PE) method and curriculum reform in the context of a new curriculum; in this case the Curriculum for Health and Physical Education (ACHPE) (Australian Curriculum and Assessment Authority ACARA, 2014) implementation. In setting out the arguments in this paper Emmel's (1979) question to whether PE could resolve "the significant degree of contradiction" reflected in practioners values and actions so that PE could successfully 'stand on its own feet' at the XII Australian Council for Health, Physical Education and Recreation (ACHPER) Conference, is recalled (Emmel, 1979, p. 42). Considering that challenge further, we can also ask whether the delivery of PE and the design of PE programs in schools has substantially changed since Mutton (1981) expressed his concerns about the teaching status of PE to a committee of inquiry into PE and sport in schools. Mutton concluded that vague notions of playing games and sports are no longer adequate attitudes to Australian PE. Literature suggests however, that there is little evidence of change aside from initiatives largely isolated to the individual teacher and occasionally a school being driven to change by a lead teacher, and there is not change that is evident more broadly through the Australian PE community of practice. This will be explored in more detail later in the paper. In writing this paper, an historical ontology is assumed whereby there is a 'reality' that is captured. This is a reality shaped over time into social structures that are taken as 'real'. In the case of PE, this 'reality' is captured in the PE crises discourse of Kirk (e.g. 2006; 2010) and descriptions of PE as historically grounded in the order, routine and compliance typical of its origins as physical training and gymnastics. It is also captured in the critical theorising about a subject historically at the margins of the educational intentions of schooling, such as by Kirk and Tinning (1990), Kirk (e.g. 1988) and Tinning (e.g. 2010). This is not an entirely new argument. For example, Scott and Westkaemper (1958) suggested that the school subject called PE developed from an "unappreciated, unwanted appendage of the curriculum" (p. xii). A common theme in critical theorising is that PE has been about schooling for a certain type of citizen, variously described as "healthy, compliant yet productive citizens" (Kirk, 1988, p. 135), or in other words 'busy, happy, good' (Placek, 1983). Assumed in this theorising is a common PE method (Metzler, 2011). From the nineteenth century objective of keeping young people morally and physically trained, physical activity during curriculum time evolved towards intellectual objectives such as knowledge and understanding, and developmental objectives like physical, social and emotional 'growth'. A recognised program of study called PE emerged. It is beyond the scope of this paper to outline that history, and readers are directed to (for example) Kirk (2010) for an overview of the history of the subject development. What will be concentrated on in this paper is a consideration of the description of PE by researchers since Emmel (1979) called for reform to resolve the rhetoric and reality of Australian PE. Historical Ontology - A Common Physical Education Method The term PE Method is taken from Metzler (2011) who explained an historically common form of PE pedagogy typified by a directive style of student-teacher interaction and a largely repetitive drill practice learning experience as the 'PE method'. Tinning (2010) described this pedagogical expression as demonstrate-explainpractice (DEP). The primacy of student demonstration of replication of fundamental and sport specific technical or mechanical models of movement led Kirk (2010) to describe this expression of PE as sport-as-sport techniques. With regard to the Australian context, Alexander (2008; 2013) summarised the problematisation of PE existing in a dominant

programming format labelled as ‘multi-activity’ (MAP), where individual units of work are not long enough to teach substantive skill competency while the teacher curriculum plans cover lots of forms of physical activity but lack coherent complexity as the content is unrelated and frequently disconnected. It is suggested that the content of PE curricula frequently lacks coherence to what is available to students in their community and ‘life beyond the school gate’ (Drummond & Pill, 2011). Alexander, Taggart and Medland (1993) invoked Crum’s (1993) assertion of a selfreproducing failure of PE to suggest Australian PE teachers lacked ‘teaching perspectives’. By this Alexander et al. (1993) meant that PE was characterised by practices such as the grading of students on perceptions of effort and compliance and not demonstrations of evidence of learning and learning content of substance. When questioned about the posited shortcomings of PE, teachers blame the attitude of students or the school for providing insufficient time for PE while few blame the construction of PE itself; however, it is the PE teacher that designs and enacts the PE experience. PE teachers should examine what they put forward as programs of learning and what students engage with as a consequence. Emmel (1979) drew attention to this when he suggested: “physical educators have always had a great deal to complain about; particularly regarding the lip service which has been paid to Physical Education by governments and educational decision makers. Unfortunately we have always tended to blame outsiders, and have been reluctant to introspect in case we might discover that some of our grievances are self propagated” (Emmel, 1979, p. 70) A participant in MacDonald’s (1995) research commented that PE teaching was not taken seriously within Australian schools, and it is seen to be a ‘Mickey Mouse’ subject. In the Australian context, something is said to be ‘Mickey Mouse’ if it is a bit weak, lacking strength. Placing this in a recent historical perspective, it is suggested that the claimed benefits of PE have not matched the reality of the experience (Hickey, 1994). This is because many students leave compulsory PE after eleven years of Foundation-to-Year 10 compulsory PE having learnt what they can’t do rather than what is possible (O’Connor, 2006) due to long identified programmatic deficits in a MAP program design and a behaviorist teaching orientation. Alexander (2013) has gone as far as to assert that many Australian school HPE programs keep ‘secrets’ from outsiders: 1. Due to MAP they struggle to show confirmation of PE’s evidential contribution to motor skills development; 2. Due to substantially directive and practice style pedagogy emphasising technical reproduction of stylised sport specific movements they don’t develop game performance (as this requires a conceptualtactical focus uncommon in many MAPs); 3. That while often tested, they don’t develop fitness due to the dominance of drill and practice style tasks that invoke low levels of moderate-to-vigorous physical activity (MVPA). Pascual (2006) captures the common belief that education is a process that encapsulates the notion of transformation (in the sense of improvement) in every area (or ability) – the cognitive, emotional, motor/movement, social, by means of experiences and valuable activities, with the aim of performing better. However, it may not be unfair to suggest that the PE critical theorising positions the historically common PE Method as an example of what Wiggins and McTighe (2007) called hands-on without mindson activity orientated teaching - leading to claims that PE as an educative endeavor is historically more rhetoric than reality in many Australian school settings. It is little wonder then that not so long ago Australian PE was considered to be in a state of crisis and quality decline with children’s skill level and physical fitness waning (Commonwealth of Australian, 1992; Tinning, Kirk, Evans & Glover, 1994; Dinan-Thompson, 2009). A recent study suggests similar skill level and physical fitness declines continue to be of concern (Rudd, 2015). Further, Penny, Emmel and Hetherington (2008) wrote of the marginalisation of Australian PE in education policy and curriculum development, an issue not unique to Australia (Hardman, 2008). Sheehy (2011) suggests that globally, PE faces the common problem of marginalisation because assessment of students commonly does not demonstrate the educative benefit of a PE program, the grading of students is often different to

the system of assessment used in so called ‘core’ subjects, and PE teachers are not good at informing parents of how PE is different from what the parent may have experienced when a student. It is acknowledged that PE teachers derive personal and professional identity from a sense of belonging to their subject (Banfield & Brown, 1996) and a need to feel competent (Hellison, 1977), and that PE is often taught by teachers sharing a common background evidencing success in sport and games, and this may contribute to the struggle to envisage alternative curricula. This is why it is interesting to note Curtner-Smith and Meek’s (2000) finding that specialist PE teachers from non-traditional PE backgrounds place a greater emphasis on learning (Curtner Smith & Meek, 2000). However, it is Ennis' (2008) opinion that developing the curricular coherence that leads to substantial learning outcomes requires more pedagogical expertise than most PE teachers possess (Ennis, 2008). It appears that like elsewhere in the world, Australian PE teaching struggles for legitimacy (Stolz, 2009) Fishburne and Hickson (2005) advised that if the concerns about a common PE method are accepted, then it is PE teachers who have the responsibility to change. Therefore, having positioned the concerns about Australian PE teaching's struggle for legitimacy (Stolz, 2009) I will now briefly consider what teachers are instead being told about how to teach PE in contemporary times before considering the challenge of reforming practice presented by the ACHPE. Contemporary Messaging - What Are Australian PE Teachers Being Told About How to Teach PE? Three of the common ‘directions’ for PE teaching existing in the literature suggested as assisting engagement with the emerging curriculum challenge that is ACHPE implementation are; constructivist perspectives, Arnoldian concept of PE, and Models Based Practice. Constructivist perspectives on teaching and learning The ACHPE is designed with constructivist teaching and learning perspectives. Generally, within contemporary ‘constructivist’ perspectives on teaching and learning, teachers are being advised to develop a teaching and learning praxis that I summarise here in three parts. 1. Identify the desired achievement standard, competency or outcome; 2 List essential questions that will guide the learner to understanding; and 3. Focus on descriptions of evidence of learning. It is anticipated that this will lead to a coherent curricular with clear distinctions between big ideas, essential questions and content. There will be a visible connection between educative purpose and learning experiences. Content is thus (in theory at least) selected because it enhances the sense of curriculum purpose and meaning for students (Pill, 2007). PE teachers are also being told that possibly the most ‘powerful’ factor in students learning within the influence of the teacher is explicit teaching (Archer & Hughes, 2011; Hattie, 2003; Rosenshine, 1986). Explicit teaching is characterised by unambiguous instructional design and delivery, and is not be confused with a direct or practice teaching style (Mosston & Ashworth, 2002). Explicit teaching involves coherent scaffolding to guide learning and clear statements about the purpose, function and requirement for what is being learnt. PE teachers should tell students about big ideas and essential questions, performance requirements, and evaluative criteria before instruction commences. Students should be able to describe the goals (big ideas and essential questions) and performance requirements of the unit or course. The learning environment should have high expectations and incentives for all students to come to understand the big ideas and answer the essential questions. Using teaching approaches informed by constructivist learning theory to teach for understanding using a pedagogical emphasis such as guided participation (Mascolo, 2009) should not be confused with the need for having clear expectations for what students should be doing, and establishing with students clarity of expectations and options for responses within a set of clearly communicated expectations. Constructivist informed ‘student-centred’ teaching does not abdicate a teacher from being clear or having clear and explicit expectations for performance. An Arnoldian concept of PE The principles and guidelines for the Australian national curriculum development state that a hallmark of the curriculum is deep knowledge, understanding, skills

and values that will enable advanced learning and an ability to create new ideas and translate them into practical applications (National Curriculum Board, 2009). In conceptualising PE within the ACHPE (ACARA, 2012) an Arnoldian construct of learning in, through and about movement (Arnold, 1979) is evident. This construct posits PE as multi-dimensional and as such substantially more than physical activity accumulation and/or the accumulation of experiences with movement forms. Expressed initially as "value learning in, about and through movement" (ACARA, 2012, p. 4), together with four other propositions, the inter-related dimensions of learning in, through and about movement are positioned to guide the philosophical, practical and pragmatic pedagogical and design matters concerning implementation of the ACHPE physical education component in Australian schools. The ACHPE expresses its Arnoldian construction as learning encompassing three strands; 1. Moving our body; 2. Understanding movement; and, 3. Learning through movement (ACARA, 2015). Models based practice Reflecting the pedagogical demands of the United Kingdom national curriculum, CurtnerSmith, Todorovich, McCaughtry and Lacon (2001) suggested that teachers would need to shift from an almost exclusive use of direct 'teacher-centred' pedagogy. We can hypothesise a similar shift will be suggested as necessary in Australia to bring the pedagogical demands of the ACHPE towards achievement of the curriculum standards. How then does the PE teacher determine a pedagogical 'model' to enable them to design and enact curriculum for student accomplishment of the curriculum achievement standards? Currently, PE literature seems to be suggesting 'models based practice' (MBP) as the answer to the design and enactment question, as well as addressing questions as to the educational value of PE (Kirk, 2013). A model of PE identifies tight alignment between learning outcomes, educational design and pedagogical enactment, and subject content. This alignment is posited as providing a 'blueprint' for teaching practice as design and enactment will either align with the distinctive features of the model, or not (Metzler, 2011). Several well-research PE models do exist (Kirk, 2013). I argue that three models seem particularly suitable to the ACHPE and its propositions, to shape the design of the PE curriculum within a learning area amalgam called HPE. The first of those models is the Sport Education model (SEM) (Siedentop, Hastie, & van der Mars, 2012). It is possibly the most theoretically and pedagogically developed and justified of all the MBP (Kirk, 2013). The model aims for competent (tactical + technical skills), literate (understand history + culture, ritual, tradition of sport, engagement in personal and social skill learning) and motivated (enthusiastic) sport participants. It has been shown that the SEM offers beyond the common 'PE method' a broad range of additional learning experiences, such as the development of social skills and critical consumerism, and for girls, lower-skilled and non-participating students a gain in important benefits in terms of participation and learning outcomes. The research evidence suggests higher levels of student engagement (enthusiastic participants), and the SEM has been successfully applied beyond team sport to outdoor and adventure activities, gymnastics, swimming, and athletics (Hastie, 2012; Penney, Clark, Quill & Kinchin, 2005). The Australian 'tactical model' (Metzler, 2011), the Game Sense approach, seems particularly suited to the tactical and technical game and sport skill learning intentions of the ACHPE as it provides a physically active context for problem posing and guided exploration of game problems, as well as fundamental and more advanced skill learning of personal motor coordination dynamics. Further, students are provided opportunities to think deeply about performance in context and apply knowledge to achieve meaningful game solutions within a learning environment characterised by higher levels of moderate-to-vigorous physical activity (MVPA) than achieved in the more common directive and drill based PE method. A Game Sense approach has been connected to 'quality teaching' dimensions as a productive pedagogy through which to teach for effective games and sport learning in Australian PE (Light et al., 2014; Pearson, Webb & McKeen, 2006; Pill, 2011). The third model that appears well suited to the expressions of student learning in the ACHPE is Health

Promoting PE, particularly within the curriculum aim of valuing learning through movement and the curriculum's intention for Health Education and PE to be interwoven where possible. Fundamentally important in the ACHPE is learning to value a physically active life. Educating through movement in the ACHPE should lead students to value and practice appropriate physical activities that enhance health and wellbeing now and in the future. The ACHPE suggests that this is best achieved where the subject intentions of Health Education and the subject of PE are integrated where possible within the learning area of HPE (ACARA, 2015). Examples of well-developed health promoting models of PE include Corbin & Lindsay's (2007) Fitness for Life, positive youth development through sport (Danish, 2004), and Healthy Active Kids (Australian Institute of Sport, 2015). New Challenges - Implementing a New Curriculum Framework and Educative Reform The MBP 'blue prints' (Metzler, 2011) concept for PE teachers seems to imply that PE teachers lack the capacity or subject mastery to be educational architects and subject knowledge brokers. It provides limiters on the range of learning outcomes, content coverage and pedagogy and it is not too far a slide for PE teaching and content questions to become about adherence to the tenets of the model and not about the intended student learning standard described for students in the curriculum document. Most of the research into MBP appears to occur without reference to student achievement of prescribed curriculum outcomes or standards at benchmark reference levels. The research is about the validation of the model as an alternative to the common PE Method. However, there is a well held belief by some that Australia PE curriculum and pedagogical reform at the 'classroom level' is necessary and MBP is the path to that reform. Some have suggested a re-imagining of PE as Health Promoting PE to accomplish an integrated HPE that moves away from, for example, a sport-as-sport techniques emphasis. It could also be argued that unlike sports, which when taught well evidence a cognitive complexity (think about the way a tennis player couples information as perceptual judgment and anticipation in reading the play in a timecompressed performance context to a complex motor response in order to meet a momentary configuration of play) and ethical notions such as equality, fairness, rule-abiding action are necessary, are educationally valued characteristics that are not usually explicitly taught in health promoting PE where individualised health activities are often accentuated. Maybe, as some PE philosophers have argued, these health promoting physical activities are valuable but not educationally valuable because they lack what might be called cultural significance or cultural capital (McNamee, 2005). However, I suggest that the health promoting model of PE has a place in the integration of health messaging and healthy behaviours to achieve both 'health education' achievement standards and/or their integration within PE units of work. The ACHPE continues a shift from teachercentred curricula grounded in an 'objectives' perspective predicated on teacher assumptions to implementation of a competence-based curriculum via student achievement standards begun by the curriculum profile for Australian schools (Curriculum Corporation, 1994). This movement in Australia is consistent with global educational reforms that have seen most OECD countries promote a shift from curricula grounded in 'objectives' to curricula grounded in competencies and standards (Hardman, 2001; Kirk, 1993, Klein, 1997; Tinning, 2001; Macdonald, 2003). However, history has shown that a new curriculum document of itself is not sufficient to bring about change as the PE Method still dominates. Brooker and Clennett (2006) suggested that frequently, new curricula has "limped along in the shadow of old knowledge and past practice and was never brought to full bloom" (p.12), leaving new directions and pedagogical imperatives marginalised in the curriculum-making process. Macdonald (2003) cautions that nationwide curriculum reform agenda can be a 'chookhouse' that returns to its normal routine after a flurry of chaotic activity. Changing curriculum requires altering teacher thinking to change what teachers do in their curriculum making and pedagogical expression of that design. The challenge to be a content expert speaks to the important role of domain knowledge in the curriculum and pedagogical

practice of teachers. Expert teachers are more likely to challenge students to master rather than to perform, to engage rather than participate, and to set challenging goals rather than encouraging students to 'have a go' or 'do your best'. It is recognised that student attitudes to PE are influenced first by the teacher (Hellison, 1995; Silverman & Subramaniam, 1999), then by the school setting (Cothran & Ennis, 1998) and third by the structure of the curriculum as it creates the educational climate (Cothran & Ennis, 1998; Martinek,1996/2000; Piéron et al., 2001). Subject experts are more comfortable in their pedagogical duties and in accommodating a greater range of learner abilities. Subject experts have amassed a large quantity of knowledge that provides a framework for attending to what matters. They have a deeper understanding of higher-order principles basic to their discipline. Subject experts translate their expertise into pedagogical activities in ways not accessible to non-experts. Expert teachers are concerned with engagement while less/non-expert is more focussed on content (Schempp, Manross & Tan, 1998). However, the organisational centre for most PE programs remains content, evidenced by the way most PE teachers typically recall content when asked to recount how they plan for teaching (Haerens, Kirk, Cardon & Bourdeaudhuij, 2011). It needs to be noted that generally, students report enjoying participating in classes which they perceive as more serious and consequential (Hastie et al 2011). What teachers know, do and care about is powerful in the student learning equation. Expert, as opposed to experienced teachers, have more understanding of the 'how' and 'why' of student success and so are more proficient in creating environments for student learning. Expert teachers are more likely to challenge students to master rather than to perform, to engage rather than participate, and to set challenging goals rather than encouraging students to 'have a go' or 'do your best' (Hattie, 2003). I argue that the challenge to move from the margins involves the PE teacher being able to clearly define their program outcomes and how the program outcomes are measured, and are willing to hold programs and PE teachers accountable for effective teaching. To remove PE from the margins of educational discourse is less about the development of new curricula, and more about moving from the 'thinness' of some curriculum accounts of PE that are little more than a list of activities with ambitions (teacher objectives) for students to have fun, be busy and be good. If PE is to move 'from the margins' to be fully supported, physical educators must be able to clearly define their program outcomes and how the program outcomes are measured, and be willing to hold programs and PE teachers accountable for effective teaching (Rink, 2013). I argue that PE teachers need to see themselves as educational designers. PE Teachers as Educational Designers Sparkes (1991) argued that change involves transformation of beliefs, a position also supported by Fullan (2001). This inevitably involves the loss of previously held beliefs and views, which is hard (Fullan, 1982). The process of leaving behind habits of being, and creating new habits which can be translated into practice based on what PE teachers are currently told about how to teach within the context of a new curriculum artefact while setting out student performance standards to result from the teaching is a large ambition. What might happen if PE teachers considered 'yesterday's practice' was for 'yesterday's students,' and instead considered that students today are radically different to last century's students, and how their early engagement in digital games contrasts to the order, control, compliance and replication expectations of the common PE Method? Prenksy (2005) challenges all educators to think of themselves as educational designers. Just like the games and sport common to PE, online and digital games are a goal-directed and competitive activity participated in within a framework of agreed rules establishing the constraints on behaviour in the game (Lindley, 2003). Gee (2003) suggests the challenge facing digital game designers is to have players learn something that takes a long time to master, is hard and complex, and yet to enjoy it. I argue that is the same challenge PE teachers face in enacting the curriculum. Gee (2003) suggests that the designers of popular digital games use good learning principles supported by research in the cognitive sciences, as digital games are in fact knowledgecentred

environments – a similar view of sports as knowledge-centred environments exists in skill acquisition literature referencing the ecological systems perspective of sport as a non-linear dynamic system. Digital game play, however, may be encouraging young people into play in different ways from that valued in enactment of the PE Method. Gee (2005), for example, asserts that digital game designers deliberately use research from the cognitive sciences on discovering how to engage players in order to learn and enjoy it. These principles include: ● Players engage through an environment where they act through their commitment to a strongly formed and appealing identity; ● A context for interaction exists in which nothing happens until the player makes a decision, after which the game or another player in the game reacts; ● Games permit players to be co-designers by virtue of the decisions they make during gaming; ● Risk taking is encouraged by lowering the consequences of failing, with failure seen as an opportunity to gain feedback about the progress of skill mastery and game understanding; ● Players commence by customising a game to fit their learning and playing styles - players thus feel a real sense of control over what they are doing ● The problems players face are sequenced in order of difficulty, so that solutions to earlier problems are well understood, enabling the development of knowledgeable decision making when confronted by harder problems at the next level; ● Games pose a set of challenges and let players solve those challenges with repetition through variation until solutions are routinised, with new challenges only then presented and able to be pursued; ● Play is the basis for game interaction and so the game mostly provides information when the player is ready for it and can use it - games therefore situate meaning in the context of the action of the play; ● Games remain motivating by synchronizing with a player's perception of achievement in the game; ● Games encourage players to think about the relationships between players, the objects within the game and the objectives of the game; ● Games encourage players to explore thoroughly before moving on and thus good game design supports players in their play before they are competent ● Players engaged in multi-player games each choose an identity with specialised skills and functions, which each player then makes available to the team, and ● Players develop team affiliations through a common endeavour or quest. The list of educational design principles suggests that the experience of digital gaming provides players with self-regulated interactivity, initiative, and control of learning through a balance of customisable and structured progressions with 'just in time' feedback or tuition options (Adams, 2010; Bates, 2004; Gee, 2003; Hopper, 2009; Salen & Zimmerman, 2004). In comparison, the traditional instruction model of the PE Method with MAP design is based on unsubstantiated assumptions about games and skill learning, skill development and the promotion of activity participation (Trost, 2004). I am not in any way arguing that games and sport as the content of the PE curriculum lead to the educational thinness of PE, rather, that it is the persistence of design and pedagogical emphasis on reproduction that compromises PE on what it claims to be – an educative enterprise. Thinking like a game developer means planning carefully before delivery (Kapp, 2011). Careful planning is the foundation upon which good digital games are built to provide players with good learning (Gee, 2003, 2005, 2007), meaning that teaching that is guided and organised by principles empirically confirmed by research provides effective and deep learning (Bransford, Brown, & Cocking, 2000; Gee, 2009). Using game designer as a metaphor (Keramidas, 2010) for PE curriculum design, PE teachers would 1. Purposefully use play to feed learning intentions; 2. Encourage immersion through challenge, engaging student curiosity and capacity to customise the play experience; 3. Design play within the boundaries of action (or constraints) for the challenge point of the students; 4. Recognise and reward player achievement; and 5. Provide students with quantifiable outcomes, which Adams (2010) called victory conditions and mastery conditions (Pill, 2014).

5.1.6 Comparative study of professional preparation in physical education of India with UK

Within the UK, physical education finds itself, as a curriculum subject, in an arguably unique position – in a 'crowded and contested policy space' (Penney 2008, 35) with felt pressures from three competing discourses and policy areas, namely education, sport and health (Houlihan and Green 2006). For example, the sport discourse competes with discourses surrounding the purpose of physical education within schools, such as physical activity for the purposes of health and issues surrounding the discourse of 'healthism' (Evans, Rich, and Davies 2008), as well as competing with discourses of education surrounding issues related to the content of physical education in the school curriculum and their educational objectives (Capel 2007). Consequently, as important policy areas, education, sport and health have served as powerful attractors that have influenced and shaped what physical education has become over time. Though issues of commonality may be found across the world, it is the movement culture within which physical education is located that serves to highlight specific areas for critical discussion (Crum 1993). Movement culture is 'an umbrella concept which comprises all leisure actions in which the human moving act is the essence' (Crum 1994, 115) A common term within German and Dutch languages (avoiding the mind-body dualism of 'physical culture'), it more specifically: refers to the way in which a social group deals with the need and desire for movement beyond labour or maintaining life. Movement culture contains the set of movement actions and interactions (sport, play, dance, or other fitness activities) that encompass a group's leisure. (Crum 1993, 341) Movement cultures are of course incredibly diverse and reflective of different times and spaces. Comparison of traditional dances and related costumes and music from across the world is illustrative of such a concept. As with any concept of culture, movement cultures are also susceptible to change and influence. Parallels here can be found with food. What we ate a century ago contrasts markedly with our diets and choices of today, with our consumption extending beyond the sole need for survival. This paper contests that within the UK, as physical education and its various facets, such as curriculum and pedagogy, have evolved within the nexus of the competing agenda of powerful attractors, it has become disconnected in four specific ways. Firstly, physical education has become disconnected from the wider movement culture. Secondly, it has become disconnected from other curriculum subjects. Thirdly, physical education has become disconnected within the curriculum between different age phases; fourthly, there is a disconnection between training and teacher needs. This paper will discuss each of these four disconnections and, importantly, offers suggestions about how reconnections might be found. Disconnection from the wider movement culture Within UK movement culture 'sport' has occupied a dominant position, traditionally conceived of as a highly competitive activity in which the achievement motive has remained uppermost. As a consequence, pedagogically, a skills-focused approach (typical of sports) has been pervasive for generations within both coaching and teaching structures (Whitehead and Hendry 1976). Physical education has continued to be delivered using a limited range of teaching approaches, the most prevalent of which are formal, didactic and teacher-centred (Green 1998; Curtner-Smith 1999; Metzler 2000; Kirk and Kinchin 2003; Kirk 2010). Over time the discourse has shifted 'away from valuing individual creativity and problem solving towards performance, away from process to product' (Wright 1996, 340). Subsequent curriculum designs over the past half-century have continued to draw upon these ideas, with their related forms providing the basis for most current physical education programmes (Kirk 2003). However, Crum (1994, 118) indicates that in recent times, the broader cultural landscape and 'the movement-cultural landscape has drastically changed'. Beck (2011) terms this cultural shift a move from first modernity to second modernity. In this perspective, modern social relations are initially conceived as 'contained' territory (on a national, regional and local level) and most institutions boast an integrated relation to the nationstate. The freedom and equality

of its individuals are moulded by powerful social institutions which they strongly adhere to and are disciplined by, such as the workplace (factories and unions), school and the church (Beck et al. 2003). By contrast, in second modernity, society is far more globalised (and borderless), facilitated by developments in technology. Changes in family and working practices and roles have also occurred – most notably the shift towards egalitarian viewpoints on gender (Beck and Beck-Gernsheim 1995). More intense political individualisation has also developed a consumerist and choice-driven society which sees less legitimacy in traditional social institutions (Beck and Beck-Gernsheim 2001). Beck (2011, 281) concludes that this leaves us with 'a new kind of society and a new kind of personal life [. . .] coming into being'. In this new society, traditional collective organisations such as the church, school, labour unions and family command less power than they once did (Giddens 1991). Rather than choosing to be seen to have prescribed or standard identities through memberships and affiliations, there is an unabated trend toward people coming to think of themselves as unique individuals, exercising self-consciousness, creativity and agency (Prout 2000). In relation to young people, Beck (1998, 78) suggests that within western cultures this concept of individualisation is so strong that they: '. . . no longer become individualized. They individualize themselves. The ''biographization'' of youth means becoming active, struggling and designing one's own life' (Beck 1998, 78). The traditional values espoused by dominant sporting forms and traditional physical education practice represent the antithesis of this viewpoint. Holland and Thomson (1999) indicate that the prevailing attitude on the part of young people, in empirical findings, thrives in new kinds of institutions in which authority and allegiance must be constantly renegotiated, re-established and earned. In short, in an increasingly individualised world, young people articulate an: 'ethic of reciprocity arguing that their respect could be won by anyone who respected them . . . they tend to be very wary of claims to authority and respect on the basis of tradition, custom or force' (Prout 2000, 308). As it stands, physical education as currently taught in UK schools increasingly fails to engage young people and thus fails to prepare them to become active creators and consumers of the varied forms of physical activity available outside school (Sandford and Rich 2006). The sad result of this, at a time when obesity rates are rising and populations are becoming increasingly sedentary (Green 2002; Fairclough and Stratton 1997), is the alienation of a significant number of those young people (Kirk and Macdonald 1998). Low participation in a physically active, healthy lifestyle is a major concern, exacerbated by the cycle of reproduction of curriculum and practice within physical education. This process has proven to be enduring and surprisingly resistant to change (Tsangaridou 2006). As such, the potential for further dissatisfaction and disengagement from physical education remains extremely high. Perhaps the most obvious way forward here is to embrace Crum's (1994, 116) proposal that: 'physical education should be arranged in view of learning with utility value for the movement culture outside the school [maximising] its potential to qualify youngsters for an emancipated, satisfying and lasting participation'. The viewpoint of emancipation for young people has resonance with the ideals of second modernity and could be embraced rather than resisted. This might, therefore, include a movement culture which allows growing children opportunities, such as learning to swim and ride a bike, but also supports their progress through a multitude of activities and experiences which they may need in later life. Crum (1992) considers that the activities children need to be prepared for to support their active participation within the wider movement culture may include elite sport, competitive club sport, recreation sport, fitness sport, risk and adventure, lust sport and cosmetic sport. Though these and other classifications may be debated, what is clear is the need to make physical education relevant to more young people and to reconnect it to the wider movement culture. To achieve this reconnection, its position needs to be more reflective of the era of second modernity, as opposed to the era of first modernity in which it was conceived. Disconnection from other curriculum subjects: The marginalisation of physical education

within school curricula is deeply rooted in philosophical thought in which the physical is considered subordinate to the mental. Such Cartesian perspectives on a mind-body split continue to pervade western European approaches to education, in which the physical remains separate from and inferior to cognitive activity (Sparkes, Templin, and Schempp 1990). This elevated status of intellectual labour over physical work is reflected in relationships between work and play, where work activities are held in high esteem due to the significant level of seriousness involved and play is marginalised and inconsequential (Kirk et al. 1986b). Schools continue to assume this mind-body dichotomy and position play-like physical activities, upon which physical education depends, as areas of the curriculum which offer pupils a break from the 'real work' in the classroom (Giroux 1983; Kirk 1988; Jess 2010). This recreative contribution to the informal, hidden school curriculum has consequently become the justification for the placing of physical education in the lower echelons of a hierarchy of subjects within the formal curriculum (Kirk 1992; Capel 2007). The denunciation of sports as merely requiring pupils to learn a 'knack' or 'trick', and thus offering little in the development of educational understanding, serves to illustrate the peripheral position of physical education in comparison with subjects that are deeply rooted within rational forms of knowledge, such as science and mathematics (Peters 1996). Long-standing debate over the educational value of physical education centres on lines of argument stemming from what educational activity is and should be. In distinguishing between schooling and education, Carr (1997) argues that physical education becomes part of a rich collection of activities which may or may not have educational value, but nevertheless retain a valuable role in developing a pupil's understanding and ability to function in our world. Despite such perspectives, the clamour of physical education departments to offer courses with examination accreditation at Key Stages 4 (pupils aged 14– 16) and 5 (pupils aged 16–18) is an example of Reid's (1997) favoured approach: redefining the subject into a sphere of academic study. The attempts to reposition physical education as a subject worthy of academic study reflect what Kirk (2010, 6) refers to as the 'academicization' of physical education teacher training. By offering physical education equal footing and status with other routes of study in higher education, Kirk (2010) believes, the degree status awarded to Teacher Training in Physical Education has served to move the subject away from a sole field of study into growing 'sub-disciplines' of studies in 'Sport'. More significantly, he argues, theoretical study has pushed student engagement with practical physical activities aside and separated physical education students from the content they are required to teach. In this 'crisis of content knowledge', he believes, a pervasive and durable identity and mode of pedagogical practice of 'physical education as sport techniques' have been created and continually regenerated (Kirk 2011). This enduring and uniting feature of the subject suggests the existence of an implicit agreement among school practitioners which has served to construct a physical education landscape dominated by a 'sporting model' (Capel 2007, 494). The reality of this practice amounts to the repetitive learning of techniques associated with a core curriculum of sports dominated by traditional games, which are not reflective of pupils' needs or the wider movement culture outside of school. Pupils face consistently regurgitated content focused upon the mastery of performance skills, more often than not abstracted from their movement contexts. Exploration and learning of activities are severely restricted by short lessons, limited curricular blocks of sports and teacher-directed learning. Despite the intention to facilitate development in the performance of these sport techniques, pupils' progression throughout their years at school remains very limited (Underwood 1983; Siedentop 2002; Capel 2007; Kirk 2010). The primary aim of this version of sport culture is to engender pupils' love of sport – but, worryingly, it merely guarantees the development of the physically able (Evans 1992). Physical education subsequently serves as inadequate preparation for pupils to pursue a healthy, active lifestyle in adulthood (Kirk and Macdonald 1998). Policy surrounding past and current iterations of the National Curriculum

for Physical Education across all ages has embraced sport discourses of excellence and performance (Penney 2000) – none more so than recent policies such as the Physical Education School Sport and Young People (PESSYP) strategy and its predecessor, the Physical Education School Sport and Club Links (PESSCL) strategy. These have secured government investment based upon the reputed contribution that physical education makes to the hidden curriculum (Brettschneider 1999), identifying it as a tool to raise pupil attainment and facilitate whole school improvement (Casbon and Walters 2004; Capel 2007). However, the hand behind the tool has been primarily concerned with driving through policy and infrastructure couched in the language and practices of sport (Green 2008). The endorsement of this 'sportification' of physical education serves to confirm its peripheral role in the curriculum, subordinating it to the role of a sweetener to the medicine required to increase pupil attendance, behaviour and achievement. Accompanying funding streams supporting the PESSCL and PESSYP strategies have endorsed the influx of external delivery agents into curricula of physical education. At the primary school level, the meagre funding given to schools for provision of statutory Planning, Preparation and Assessment (PPA) time has also heralded the increased delivery of physical education by inexpensive non-QTS personnel (Blair and Capel 2011). Despite concerns being raised over the breadth of the delivery of the National Curriculum for Physical Education – in particular the strands requiring pupils to contextualise and reflect upon their learning – the significant input of these sport specialists has merely lent considerable vigour to the enduring 'sporting model', particularly at the primary school level (Capel 2007; OFSTED 2005, 2009; Griggs 2010; Ward 2011). Within primary schools, class teachers have placed misconceived value upon the narrow subject knowledge exhibited by these sport coaches and as a result have willingly relinquished their physical education lessons to them (Ward 2011). Head teachers have also readily embraced these inexpensive solutions to their staffing issues (Griggs 2010). In many respects, the emergence of pedagogical models such as sport education, co-operative education and tactical-games models is a response to the limitations of physical education as 'sport techniques' (Kirk 2010). By attempting to align curricular content with child-centred teaching strategies, these models encourage the provision of physical activity experiences which foster learning across the cognitive, psychomotor and affective learning domains. However, guidance on how to manage learning within and between these domains relies heavily upon a teacher's knowledge and experience; as such, they remain problematic for inexperienced, non-specialist teachers (see Griffin and Sheehy 2004; Light and Georgakis 2005; Turner 2005). Research surrounding these models remains predominately confined to the pedagogical processes during their use, and knowledge of their adoption across schools continues to be very limited (see Hunter 2006). It appears that the enthusiasm met by the academic community has contrasted significantly with that of practising school teachers (Lauder 2001). At a policy level the publication of texts by government bodies, for example publications supporting high-quality physical education (QCA 2005), also needs to be approached with caution and should not be confused with substantive changes in pedagogical practices within physical education. Previous changes in curriculum documentation have done little to change the conservative landscape of physical education curricula (Curtner-Smith 1999). The content of this documentation, in particular the curriculum, must therefore serve to radically challenge current practice. If government policy is to continue to centre on the role that physical education, school and community sport can play in social and health reform, life-long participation in movement culture must become an essential starting point for reconnecting the subject with its educational aims. Making 'sacred cows' of traditional sports and racing to adopt invogue youth activities in an attempt to make the subject culturally relevant will not suffice in achieving this reconnection (Crum 1994, 128). Rather than trying to predict the future landscape of movement culture, Crum (1994) believes decisions governing the inclusion of physical activities in physical education curricula should be based upon the

relevance of a physical activity to the teaching-learning process. By placing learning at the forefront of the subject, Bloom's (1956) psychomotor, cognitive and socio-affective domains of learning become the key structure which reconnects physical education with broader educational aims. Moving away from an activity-based curriculum to one which is thematically orientated will enable learning to form the key structure through which pupils are supported in becoming successful, selfdirected learners, with volition to pursue life-long involvement in healthy physical activity (Penney and Chandler 2000). It is suggested here that the strands of learning presented by Crum (1993) enable a greater connection to be made between learning and wider movement culture. These are: . Technomotor – learning to solve the technical motor problems presented by moving in context; . Sociomotor – learning to solve the social problems presented by moving and playing with and against others; . Cognitive/reflective – learning to understand how to become more effective at solving movement problems through understanding the patterns and processes inherently involved; . Affective – development of a positive bond with exercise, movement, play and sport. Such an approach demands that learning should essentially be concerned with the process of solving movement problems in different contexts, rather than being led by specific sporting activities. According to Crum (1994), the development of a personal movement identity is a crucial factor in life-long involvement in movement culture; this necessitates pedagogy which centres upon the management of interrelationships between learning within these strands, and in particular the development of an understanding of the social making of movement culture. This entails ensuring that pupils understand that rules can and should be changed to support learning and enjoyment. Pedagogy should also empower pupils to value and organise fitness for health and become critical consumers of movement culture by understanding the powerful agents involved in sport. Movement culture is a valuable lens through which we can view the human desire for movement beyond that of labour or the maintenance of life. It avoids the mind-body dualisms of physical cultures and reflects a diverse and continually changing aspect of humanity. Within UK movement culture, sport has traditionally occupied a dominant position, historically centring upon achievement determined through a competitive motive. Traditional forms of physical education do not connect with the growing individualisation, creativity and agency present in the second modernity, in which authority and allegiance are constantly renegotiated. When viewed in this way the subject appears to be characterised by a series of disconnections between wider movement culture, other curricular subjects, curriculum age ranges and professional training and teachers' needs. Reconnecting physical education with wider movement culture requires the subject to reflect on the era of second modernity and relinquish its grip on traditional sports. According to Crum (1994), physical education should prepare children to take up an active, emancipated, satisfying and long-lasting participation within wider movement culture. This will require the teachers to draw upon a more diverse range of sporting cultures, such as elite sport, competitive club sport, recreation sport, fitness sport, risk and adventure, lust sport and cosmetic sport. In adopting curricular structures and teaching approaches limited to the performance of techniques and competitive success, physical education has struggled to maintain its educational status. This has been exacerbated by successive government policies and strategies couched in the narrow discourses of traditional competitive sport. Reconnection with broad education aims can be achieved by embracing Crum's (1993) five strands of learning: technomotor and sociomotor competence cognitive/reflective competence and affective bonds. The development of the latter should, essentially, be concerned with the process of solving movement problems in different contexts, rather than being led by specific sporting activities. Central to this is the development of a personal movement identity in which understanding the social construction of movement culture becomes an important feature. This entails ensuring that pupils understand that rules can and should be changed to support learning and enjoyment. Pedagogy should value fitness

for health and support pupils in becoming life-long critical consumers of movement culture by understanding the powerful agents involved in sport. Gaining progressive experience of competency is an important condition for continuous participation in movement culture. Key to this is the development of a repertoire of skills and understanding, fostered through a structured learning process which enables competent and meaningful participation. The current National Curriculum for Physical Education and 'top-down' national policies have hampered curriculum coherence and progression across school age ranges. Crum's (1994) strands of affective development and technomotor, sociomotor, cognitive and reflective competencies should form the key framework to reconnect different policy agendas and provide a scaffold upon which to hang the chronological design of progressive and coherent learning activities which are connected with wider movement culture and not simply the teacher's own personal preferences. The professional training of teachers within the UK is characterised by acquisition of reductionist and functional competencies. Disquiet about the value of teacher preparation has been voiced for the past 20 years, particularly with regard to the training offered to primary-level teachers to teach physical education. Deficiencies in time allocated to the subject and courses' lack of ability to impact on the personal beliefs of trainees have served to continually reinforce pedagogy dominated by the practices of competitive sport. This has been reinforced by government policy and expenditure that has encouraged schools to employ sports coaches and resulted in CPD programmes based upon the whims of funding streams and the agendas of sporting NGBs. At the heart of this disconnection between professional training and teachers' needs is the continued focus upon physical education as 'education through the physical' and 'training of the physical'. Such concepts rely upon overcoming constraints within modern schooling, such as limited time and resources, which will never disappear. Professional training should develop portable pedagogical content knowledge rather than silos of specific content knowledge. This will enable teachers to move naturally between different forms of movement culture and design progressive, engaging learning activities that balance technomotor, sociomotor, cognitive/reflective and affective learning.

Teaching aids - Time-table, Concepts, credit system for various subject courses theory and practical, Impact of technology in physical education and sports.

5.9.1 What is teaching aids?

Teaching aids are objects (such as a book, picture, or map) or devices (such as a DVD or computer) used by a teacher to enhance or enliven classroom instruction (Merriam-Webster). They could be audiovisual teaching aids such as videos and guest lectures or tactile like 3D models.

Instructional materials are defined as resources that organize and support instruction, such as textbooks, tasks, and supplementary resources (adapted from Remillard & Heck, 2014). It refers to the human and non-human materials and facilities that can be used to ease, encourage, improve and promote teaching and learning activities. They are whatever materials used in the process of instruction (IGI global). The great Soviet encyclopedia defines IMs as educational resources used to improve students' knowledge, abilities, and skills, to monitor their assimilation of information, and to contribute to their overall development and upbringing.

Broadly speaking, any device that helps teach can be called a teaching aid. These devices can be traditional items such as blackboards and flannel boards as well as modern devices such as tablets and projectors. Scientific tools such as telescopes and microscopes could also be used as teaching aids in a given context. Two overarching common factors between most teaching aids: mediums that promote sensory engagement and stimulation.

Classification 1:

Non-electronic – Chalkboards, flip boards, slates, photos, telescopes,

Electronic – Powerpoint slideshows, videos, Augmented reality/Virtual reality goggles, AV-room equipment

Classification 2:

Auditory: radios, tape recorders, CD players

Visual: Slides, projectors, digital screens

Audiovisual– Youtube content, Vines (yes, they are helpful), Ted Talks, Live streams, documentaries

Audiovisual and tactile – 3D models, plants, rocks, field visits.

Teaching Aids are material used by a teacher to supplement classroom instruction or to stimulate the interest of students. As we all know that today's age is the age of science and technology. The teaching learning programmes have also been affected by it. The process of teaching - learning depends upon the different type of equipment available in the classroom.

Need of Teaching Aids

1) Every individual has the tendency to forget. Proper use of teaching aids helps to retain more concept permanently.

2) Students can learn better when they are motivated properly through different teaching aids.

3) Teaching aids develop the proper image when the students see, hear taste and smell properly.

4) Teaching aids provide complete example for conceptual thinking.

5) The teaching aids create the environment of interest for the students.

6) Teaching aids helps to increase the vocabulary of the students.

7) Teaching aids helps the teacher to get sometime and make learning permanent.

8) Teaching aids provide direct experience to the students.

Types of Teaching Aids

There are many aids available these days. We may classify these aids as follows-

1) Visual Aids

The aids which use sense of vision are called Visual aids. For example :- actual objects, models, pictures, charts, maps, flash cards, flannel board, bulletin board, chalkboard, overhead projector, slides etc. Out of these black board and chalk are the commonest ones.

2) Audio Aids

The aids that involve the sense of hearing are called Audio aids. For example :- radio, tape recorder, gramophone etc.

3) Audio - Visual Aids

The aids which involve the sense of vision as well as hearing are called Audio- Visual aids. For example :- television, film projector, film strips etc.

Importance of Teaching aids

Teaching aids play an very important role in Teaching- Learning process. Importance of Teaching aids are as follows :-

1) Motivation

Teaching aids motivate the students so that they can learn better.

2) Clarification

Through teaching aids , the teacher clarify the subject matter more easily.

3) Discouragement of Cramming

Teaching aids can facilitate the proper understanding to the students which discourage the act of cramming.

4) Increase the Vocabulary

Teaching aids helps to increase the vocabulary of the students more effectively.

5) Saves Time and Money

6) Classroom Live and active
Teaching aids make the classroom live and active.

7) Avoids Dullness

8) Direct Experience
Teaching aids provide direct experience to the students

5.9.2 Define Time Table

A **school timetable** is a table for coordinating these four elements:

- Learners
- Teachers
- Rooms
- Time slots (also called periods)

Other factors include the subject of the class, and the type of classrooms available (for example, science laboratories). School timetables usually cycle every week or every fortnight. The phrase "school timetables" largely refers to high schools, because primary schools typically have simple structures.

High school timetables are quite different from university timetables. The main difference is that in high schools, students have to be occupied and supervised every hour of the school day, or nearly every hour. Also, high school teachers generally have much higher teaching loads than is the case in universities. As a result, it is generally considered that university timetables involve more human judgment whereas high school timetabling is a more computationally intensive task, see constraint satisfaction problem

- **Block**: This term is ambiguous, but in this article it refers to a set of lessons of different courses that must be placed concurrently.
- **Student body**: A set of students who are timetabled together, for example the 8A roll-call group.
- **Band (or cluster)**: A set of classes involving the same student body, which are therefore horizontally linked, meaning they must be on separate periods.
- **Year group** or **year level**: A set of students at the same stage of their schooling, for example Year 9.
- **Elective line**: A block of many classes of many subjects such that each student may choose one subject from the line.

The task of constructing a high school timetable involves the following issues (not an exhaustive list):

- Some schools assign the same number of periods to all subjects, but more commonly (at least outside USA) there are a variety of lengths of classes: 9 periods per cycle, 8, 7, 5 and so on. If this is the case, it means that it's not possible to have a 'coherent' structure to the timetable. 'Coherent' means that the classes in each year match up neatly with classes in other years in school-wide 'super-columns'. Non coherent timetables are much more difficult to construct.
- Occasionally there is 'vertical integration': a class from one year has a requirement to line up with a particular class from the next year. This happens mainly when students are allowed to take subjects in a higher not teach on those periods.
- Part-time teachers need to have certain entire days off. They will either specify to the school which weekdays they are or simply how many days per cycle they need off. Such teachers can greatly add to the difficulty of timetabling when they are assigned to large blocks.
- Sometimes two schools try to coordinate their timetables in order to be able to share a small number of staff. Often the schools have different bell times. Often also there is travel time between campuses which must be taken into consideration.
- Sometimes a school is spread over two or more campuses, and the timetable should minimise the amount of cross-campus travel for students and teachers. Furthermore, where travel occurs, the travel time must be taken into consideration.
- Sometimes there are constraints imposed from external organizations, such as sports venues bookings or technical education for senior students.
- Sometimes there are 2 or 3 subjects which rotate between student bodies throughout the year. For example, the 8A students might take Art in the first half of the year and Music in the second half.
- Classes should be assigned rooms in a way which attempts to give the same room to the same class (for primary schools) or the same room to the same teacher (for most high schools/secondary schools) for all or most lessons ('room constancy').
- Sometimes it is unavoidable to have what is known as a 'split class': this is a class where one teacher takes it for some lessons and another teacher for other lessons. This can happen e.g. because no single teacher is available on all scheduled periods, or because no single teacher can take it without going over their maximum teaching load. Another definition for a split class is when a teacher must teach two different grade levels in one period (for example Grade 10 French and Grade 11 French). This often occurs with less popular subjects, which are not big enough to be made into separate classes. Split classes are generally deemed highly undesirable.
- Off-timetable lessons: sometimes an occasional lesson is scheduled "off the timetable" meaning before school or after school or during lunch. This usually happens with older students. It can be a desperate response to intractable timetabling problems or a compromise reached in order for the school to be able to offer less popular subjects.

A school timetable is a reference document created by professionals that clearly shows how school resources, such as teachers and classrooms, fit together with student schedules and school schedules, as well as with days of the week. School timetables are typically developed in a spreadsheet format and may be created manually using commonly available software, or may be generated by specialized software found online.

5.9.3 Credit system for various subject courses theory and practical

The University Grants Commission (UGC) has initiated several measures to bring equity, efficiency and excellence in the Higher Education System of country. The important measures taken to enhance academic standards and quality in higher education include innovation and improvements in curriculum, teaching-learning process, examination and evaluation systems, besides governance and other matters.

The UGC has formulated various regulations and guidelines from time to time to improve the higher education system and maintain minimum standards and quality across the Higher Educational Institutions (HEIs) in India. The academic reforms recommended by the UGC in the recent past have led to overall improvement in the higher education system. However, due to lot of diversity in the system of higher education, there are multiple approaches followed by universities towards examination, evaluation and grading system. While the HEIs must have the flexibility and freedom in designing the examination and evaluation methods that best fits the the curriculum, syllabi and teaching–learning methods, there is a need to devise a sensible system for awarding the grades based on the performance of students. Presently the performance of the students is reported using the conventional system of marks secured in the examinations or grades or both. The conversion from marks to letter grades and the letter grades used vary widely across the HEIs in the country. This creates difficulty for the acadamia and the employers to understand and infer the performance of the students graduating from different universities and colleges based on grades.

The grading system is considered to be better than the conventional marks system and hence it has been followed in the top instutitions in India and abroad. So it is desirable to introduce uniform grading system. This will facilitate student mobility across institutions within and across countries and also enable potential employers to assess the performance of students. To bring in the desired uniformity, in grading system and method for computing the cumulative grade point average (CGPA) based on the performance of students in the examinations, the UGC has formulated these guidelines.

Applicability of the Grading System

These guidelines shall apply to all undergraduate and postgraduate level degree, diploma and certificate programmes under the credit system awarded by the Central, State and Deemed to be universities in India.

1. **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
2. **Choice Based Credit System (CBCS):** The CBCS provides choice for students to select from the prescribed courses (core, elective or minor or soft skill courses).
3. **Course:** Usually referred to, as ‘papers’ is a component of a programme. All courses need not carry the same weight. The courses should define learning objectives and learning outcomes. A course may be designed to comprise lectures/ tutorials/laboratory work/ field work/ outreach activities/ project work/ vocational training/viva/ seminars/ term papers/assignments/ presentations/ self-study etc. or a combination of some of these.
4. **Credit Based Semester System (CBSS):** Under the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.
5. **Credit Point:** It is the product of grade point and number of credits for a course.
6. **Credit:** A unit by which the course work is measured. It determines the number of hours of instructions required per week. One credit is equivalent to one hour of teaching (lecture or tutorial) or two hours of practical work/field work per week.

7. **Cumulative Grade Point Average (CGPA):** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.
8. **Grade Point:** It is a numerical weight allotted to each letter grade on a 10-point scale.
9. **Letter Grade:** It is an index of the performance of students in a said course. Grades are denoted by letters O, A+, A, B+, B, C, P and F.
10. **Programme:** An educational programme leading to award of a Degree, diploma or certificate.
11. **Semester Grade Point Average (SGPA):**
    It is a measure of performance of work done in a semester. It is ratio of total credit points secured by a student in various courses registered in a semester and the total course credits taken during that semester. It shall be expressed up to two decimal places.
12. **Semester:** Each semester will consist of 15-18 weeks of academic work equivalent to 90 actual teaching days. The odd semester may be scheduled from July to December and even semester from January to June.
13. **Transcript or Grade Card or Certificate:** Based on the grades earned, a grade certificate shall be issued to all the registered students after every semester. The grade certificate will display the course details (code, title, number of credits, grade secured) along with SGPA of that semester and CGPA earned till that semester.

Semester System and Choice Based Credit System

The Indian Higher Education Institutions have been moving from the conventional annual system to semester system. Currently many of the institutions have already introduced the choice-based credit system. The semester system accelerates the teaching-learning process and enables vertical and horizontal mobility in learning. The credit-based semester system provides flexibility in designing curriculum and assigning credits based on the course content and hours of teaching. The choice-based credit system provides a 'cafeteria' type approach in which the students can take courses of their choice, learn at their own pace, undergo additional courses and acquire more than the required credits, and adopt an interdisciplinary approach to learning, It is desirable that the HEIs move to CBCS and implement the grading system.

Types of Courses

Courses in a programme may be of three kinds: Core, Elective and Foundation.

- **Core Course**
  There may be a Core Course in every semester. This is the course which is to be compulsorily studied by a student as a core requirement to complete the requirement of a programme in a said discipline of study.
- **Elective Course**
  Elective course is a course which can be chosen from a pool of papers. It may be:
  1. Supportive to the discipline of study
  2. Providing an expanded scope
  3. Enabling an exposure to some other discipline/domain
  4. Nurturing student's proficiency/skill.

  An elective may be "Generic Elective" focusing on those courses which add generic proficiency to the students. An elective may be "Discipline centric"or may be chosen from an unrelated discipline. It may be called an "Open Elective."
- **Foundation Course**
  The Foundation Courses may be of two kinds: Compulsory Foundation and Elective foundation. "Compulsory Foundation" courses are the courses based upon the content

that leads to Knowledge enhancement. They are mandatory for all disciplines. Elective Foundation courses are value-based and are aimed at man-making education.

Examination and Assessment

The HEIs are currently following various methods for examination and assessment suitable for the courses and programmes as approved by their respective statutory bodies. In assessing the performance of the students in examinations, the usual approach is to award marks based on the examinations conducted at various stages (sessional, mid-term, end-semester etc.,) in a semester. Some of the HEIs convert these marks to letter grades based on absolute or relative grading system and award the grades. There is a marked variation across the colleges and universities in the number of grades, grade points, letter grades used, which creates difficulties in comparing students across the institutions. The UGC recommends the following system to be implemented in awarding the grades and CGPA under the credit based semester system.

Letter Grades and Grade Points

 Two methods -relative grading or absolute grading– have been in vogue for awarding grades in a course. The relative grading is based on the distribution (usually normal distribution) of marks obtained by all the students of the course and the grades are awarded based on a cut-off marks or percentile. Under the absolute grading, the marks are converted to grades based on pre-determined class intervals. To implement the following grading system, the colleges and universities can use any one of the above methods.

 The UGC recommends a 10-point grading system with the following letter grades as given below:

Grades and Grade Points	
Letter Grade	**Letter Grade**
O (Outstanding)	10
A+(Excellent)	9
A(Very Good)	8
B+(Good)	7
B(Above Average)	6
C(Average)	5
P (Pass)	4
F(Fail)	0
Ab (Absent)	0

 A student obtaining Grade F shall be considered failed and will be required to reappear in the examination.

 For non credit courses ‘Satisfactory’ or “Unsatisfactory’ shall be indicated instead of the letter grade and this will not be counted for the computation of SGPA/CGPA.
 The Universities can decide on the grade or percentage of marks required to pass in a course and also the CGPA required to qualify for a degree taking into consideration the recommendations of the statutory professional councils such as AICTE, MCI, BCI, NCTE etc.,
 The statutory requirement for eligibility to enter as assistant professor in colleges and universities in the disciplines of arts, science, commerce etc., is a minimum average mark of 50% and 55% in relevant postgraduate degree respectively for reserved and general category. Hence, it is recommended that the cut-off marks for grade B shall not be less than 50% and for grade B+, it should not be less than 55% under the absolute grading system. Similarly cut-off marks shall be fixed for grade B and B+ based on the recommendation of the statutory bodies (AICTE, NCTE etc.,) of the relevant disciplines.**Fairness in Assessment:**

Assessment is an integral part of system of education as it is instrumental in identifying and certifying the academic standards accomplished by a student and projecting them far and wide as an objective and impartial indicator of a student’s performance. Thus, it becomes bounden duty of a University to ensure that it is carried out in fair manner. In this regard, UGC recommends the following system of checks and balances which would enable Universities effectively and fairly carry out the process of assessment and examination.

- In case of at least 50% of core courses offered in different programmes across the disciplines, the assessment of the theoretical component towards the end of the semester should be undertaken by external examiners from outside the university conducting examination, who may be appointed by the competent authority. In such courses, the question papers will be set as well as assessed by external examiners.
- In case of the assessment of practical component of such core courses, the team of examiners should be constituted on 50 – 50 % basis. i.e. half of the examiners in the team should be invited from outside the university conducting examination.
- In case of the assessment of project reports / thesis / dissertation etc. the work should be undertaken by internal as well as external examiners.

Computation of SGPA and CGPA

The UGC recommends the following procedure to compute the Semester Grade Point Average (SGPA) and Cumulative Grade Point Average (CGPA):

1. The SGPA is the ratio of sum of the product of the number of credits with the grade points scored by a student in all the courses taken by a student and the sum of the number of credits of all the courses undergone by a student, i.e
   SGPA (Si) = Σ(Ci x Gi) / ΣCi
   where Ci is the number of credits of the ith course and Gi is the grade point scored by the student in the ith course.
2. The CGPA is also calculated in the same manner taking into account all the courses undergone by a student over all the semesters of a programme, i.e.
   CGPA = Σ(Ci x Si) / Σ Ci
   where Si is the SGPA of the ith semester and Ci is the total number of credits in that semester.
3. The SGPA and CGPA shall be rounded off to 2 decimal points and reported in the transcripts.

Illustration of Computation of SGPA and CGPA and Format for Transcripts

1. Computation of SGPA and CGPA

Illustration for SGPA

Course	Credit	Grade letter	Grade point	Credit Point(Credit x Grade)
Course 1	3	A	8	3x8=24
Course 2	4	B+	7	7x4=28
Course 3	3	B	6	3x8=18
Course 4	3	O	10	3x10=30
Course 5	3	C	5	3x5=15
Course 6	4	B	4	4x4=16
	20			130

Thus, SGPA =139/20 =6.95

Illustration for CGPA

Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
Credit : 20 SGPA:6.9	Credit : 22 SGPA:7.8	Credit : 25 SGPA: 5.6	Credit : 26 SGPA:6.0	Credit : 26 SGPA:6.3	Credit : 25 SGPA: 8.0

Thus, CGPA = 20 x 6.9 + 22 x 7.8 + 25 x 5.6 + 26 x 6.0 + 26 x 6.3 + 25 x 8.0/ 144 = 6.73

2. Transcript (Format): Based on the above recommendations on Letter grades, grade points and SGPA and CCPA, the HEIs may issue the transcript for each semester and a consolidated transcript indicating the performance in all semesters.

5.9.4 Impact of technology in physical education and sports:

This decade is characterized by rapid technological advances. Being in the digital era, technology has accounted for many changes in the educational sector. These changes range from the method instruction is delivered, to the attitudes on how learning occurs to the amount of collaboration and knowledge sharing between not only students, but also between teachers, managers and administrators. ICT represents one of the most useful tools to enhance curriculum if used correctly. According to Waxman H.Lin & Mitchko (2003), teaching and learning with technology has had a significant impact on students' outcomes when compared to traditional instruction. In the future, P.E will need to undergo radical changes. If technology had an impact in learning in general education, could it also enhance teaching and learning in P.E? New developments in the field of technology will positively affect the P.E curriculum. For example, the use of technological advances will prepare physical educators for the future demands and expectations of the society. Furthermore, the Ministry of Education is laying much emphasis on integrating ICT in the teaching and learning process in secondary schools. As students perform exercises and skills in their PE classes, PE teachers can use technological tools and systems to quantify processes and results to help them learn more about themselves (Kirkwood, Manon, 2002).However, before using ICT in our schools as a teaching tool, these important questions must be addressed. What technological options are available for our PE educators? Do using technological tools in the PE classes motivate the students? What is the role of technology as an assessment tool and how it is linked to performance?

According to Green (2002), with the rapid developments in technology, ICT has made a significant impact on a number of P.E departments, and has the potential to enhance teaching and learning in P.E. Cummings (2002) further suggests that the pervasion of ICT in education is now impacting on P.E as much as on any other subjects. Many P.E departments in the U.K are currently using ICT for administration and management tasks. Computers allow us to continuously modify and update our schemes of work and lesson plans. The creation of a database of all students in the schools enable school administrators to maintain detailed records of assessments, key stage grades, sports awards and extra-curricular achievements.

The use of ICT in PE makes the science of sport come to life by linking both physical and mental activity. It also helps to create full-fledged students who are able to concentrate better on both practical and theoretical work. Besides, it helps students to develop a better understanding of their own body parts and that of the human body in general. It also raises the profile of P.E within the establishment by making the subject not only interesting, but also attractive and effective. Furthermore, it brings enthusiasm and motivation for both PE teachers and students.

ICT is also very important with regards to school administrative work. In fact, data can easily be collected and shared for analytical purposes, e.g. electronic records of performance of athletes. ICT also promotes teaching and learning within the school organization by changing the nature of learning itself. Students are motivated and are able to grasp essential concepts that previously eluded them. By developing their abilities to think in different ways students can select and apply skills, tactics and ideas, to evaluate and increase performance.

Moreover, with the infusion of ICT in PE, life-long learning can be supported through the collection of resources via the internet. According to Mike Rimmer, Head of Physical & Social development at the Buttershaw upper school in Bradford: "It's the excitement of learning in a different way."

In addition, with ICT, pupils are able to get access, select and interpret a wide range of information more easily. They are also able to recognise patterns, relationships and behaviours using appropriate technological software. Furthermore, models, predictions and even hypothesis can be made by students with the advent of ICT. Access to images of quality performances can be obtained through video filming. Hence, students are able to review their work and modify it to improve the quality. Through ICT tools reliability, evaluation and accuracy of actions can also be done. ICT further provides a very reliable source of communication among people within the organisation. The use of email, fax, facebook or even skype will enable quick and direct communication among P.E staffs and even students in other schools on fixtures, meetings and many other relevant matters. Therefore, accuracy of information does not depend only on the busy school secretary.

Throughout ICT tools, pupils can benefit from immediate feedback to improve their observational and analysis skills. As they familiarise with the software, they are able also to point out the relevant points for positive technique. The main advantage, however, remain the general improvement in the performance level of the majority of the pupils' work, as they struggle their way to look impressive especially if their performance will be analysed on digital video system.

There are many good options available to physical educators in regards to technology. Many of these technologies are easily accessible and are easily incorporated into the curriculum.

Pedometers

Theses apparatus also called step counters are mechanical sensors used to count steps and can easily be incorporated in PE classes. They address motivation, assessment, and advocacy. Furthermore, they are portable and can be worn under the belt and be kept the whole day. Today, it can be said that the pedometer has become a recognized acceptable tool for measuring physical activity. Students can wear a pedometer and receive immediate and continuous feedback regarding their activity level (Beighle, Pangrazi,Vincent, 2001). Using pedometers at school can also demonstrate to parents that students are achieving a certain level of physical activity. By using the pedometers students will be able to see progress towards set goal and consequently will be more motivated in the classes.

Heart Rate Monitors

Based completely on the student ability level and current level of fitness, the heart rate monitor makes learning more student centered. It also provides immediate feedback that can make students work harder (Bian, Partridge, King, Andon, Boyer, 2007). As fitness level increases, student feel that their cardiovascular system is working and can set individualized goal to work more effectively. The Heart rate monitor will also provide real time data that will allow students to see how different exercises and activities affect the heart rate. Hence the heart rate monitor is a convenient apparatus that allows students to use up to date technology (Kirkwood, Manon 2002). Charts of maximum heart rate can be made for each student and track increase or decrease in their heart rate.

Digital Video camera and visual analysis software

The use of the motion analysis system will surely enhance many areas of the physical education curriculum both in research and teaching. Using digital video camera has indeed simplified the collection of data. These results can then be imported to carry out interactive multimedia presentation to provide students with a better understanding of the importance of breaking skills into components and the consequences of subtle variation in techniques (Ladda, Keating,

Adam, Toscana, 2004). The visual analysis software allows students to view captured movement and to analyse them. This particular technology can help teachers to control student's progress towards motor skills goals; provide feedback opportunities and assessing students learning (Fiorentino and Castelli, 2005).

Using digital video camera to record pupils' performance in table tennis for example, can be a useful tool to help students improve their techniques. With the addition of motion analysis software, pupils have a professional supportive tool. For instance during a training session, a 'robot - pong', which is a special technological tool that distribute ping pong balls at varying direction and speed, is used to face a student. The P.E teacher can then use the Digital video camera to analyse the actions more closely. This is done with a view to improve the teaching and learning of table tennis. Digital video clips were used weekly to stress on proper and improper techniques and then the pupils were given the opportunity to evaluate their own techniques and the technique of others via the 'déjà vu' resource. In the Mauritian context, some state colleges which are actually working on a pilot project set up by the ministry of education are presenting candidates for the Cambridge O level Examination. Teachers involved in this project will have to make use of video cameras during the practical examination to record students' performance and then send them to Cambridge University. Each college involved in the pilot project have already received a laptop, an overhead projector and its respective screen. Digital video cameras and internet connection facilities will soon be available in these schools.

Simulation and Games

Games such as Dance, Dance revolution, Fx cycles and Nintendo Wii Fit provide opportunities for students to be physically active and simultaneously enjoying themselves .These games can also be combined to other technologies to enhance the experience (Di Giorgio, 2004). Concerning the Nintendo Wii Fit, work outs are done on a small balanced board that gamers stand on. The players receive instructions from screen and mimic the stretching and muscle building exercises. The Wii Fit tracking feature shows progress using the system. Therefore, it can be a valuable PE tool. However, teachers should not consider gaming system equivalent to traditional exercises. It should be considered as a supplement and a not a replacement of traditional exercises.

PE Tech Tools

Physical Education Apps

The boom in mobile technology has provided physical educators with a wealth of tools. There are numerous apps that can be taken advantage of, with some allowing for movement tracking and nutritional help, while others assist in enhancing athletic activities like basketball. Apps involving video and picture analysis can be used to examine athletic movements, and ultimately help to improve physical skills.

Physical educators should not shy away from trial and error while thinking of new ways to use apps in and beyond the classroom. Apps like MyFitnessPal, Coach's Eye, and Team Shake show the breadth of offerings available and can get you thinking about many different possibilities.

Wearable Tech

Wearable technology has changed the way we collect and evaluate personal data. With increasing awareness in physical education departments about the importance of feedback from daily activities, technological tools such as pedometers, smart watches, and heart rate monitors are increasingly being used. With wearable technology, students will be able to track and analyse their heart rates, activity levels, or the number of steps to take within a time frame.

With a pedometer for instance, during a 3 vs 3 basketball game, students may be asked to make predictions on how many steps they think they can take during the game. Once the game is over, they can then chart the steps and do some problem solving into ways to add to their steps for the next game. The open-mindedness and enthusiasm that many students have can be leveraged to not only to improve their physical well-being at this stage, but also to impart lifelong lessons about taking responsibility for their own health.

Virtual Connections

Effective learning involves two-way communication where students are able to engage in discussion and challenge the teacher's ideas in order to achieve a deeper understanding. Many classrooms have already started taking advantage of the online world by creating classroom blogs or websites. A classroom website is valuable for encouraging discussion after class, or enabling communication for students applying PE techniques or working on sport practices or exercise outside of classroom.

Another awesome way to leverage virtual connectivity is to invite guests into your classroom via video chat programs such as Skype and Hangouts.

Students can also be encouraged to get involved with online courses about nutrition, exercising, and fitness principles, or web quests geared toward purposeful inquiry.

Gaming Systems

Interactive video games such as Dance Dance Revolution, Wii Fit, and Wii Sports, can be invaluable in promoting physical activity of students and are already in use across many physical education centers. They serve as a reasonable alternative to exercising in bad weather and produce results similar to those seen with outdoor physical activity. Physical education teachers can easily tap into students' love of video games to foster interest in physical education. Video games are extremely engaging and immersive, and can be taken beyond the school environment and continued at home.

Video Resources

As a result of advancements in technology and faster internet becoming available today, it is now possible to stream videos on YouTube and Vimeo. Physical education teachers can take advantage of this and recommend workout videos to students, as well as other types of content which provide useful demonstrations for skill development.

Whether they are dance or yoga videos, students may become so entranced with some YouTube channels that follow them, encouraging them to do even more than the teacher asks. No matter the level of the class, teachers will be able to find age-appropriate videos to share.

The rapid development of technology over the past two decades has provided many new and creative ways for educators to present instructional materials effectively. Until recently, those advancements have focused on desktop technology, which limited their use in physical education The National Association for Sport and Physical Education (NASPE) believes that technology can be an effective tool for supplementing instruction when used appropriately. Therefore, the primary purpose of this document, developed by a task force of NASPE's Physical Education Steering Committee, is to provide guidelines for using technology to help students achieve the Standards for Physical Education. Teachers now face a generation of students who have never known life without a computer, video game console, cellular phone or Internet access; and that is changing the scope of education dramatically. Technology tools can provide objective data on activity levels and creative methods for individuals to engage in physical activity. Studies have indicated that active gaming can promote higher levels of energy expenditure compared to seated video games, as well as increasing heart rate and oxygen consumption. National School Health Policies and Programs Study indicated that 42% of physical education teachers receive staff-development training on using physical activity monitoring devices; 37% on using technology overall. Also, between 17% and 49% of the teachers studied received additional training for administering fitness tests, assessing student performance, and developing portfolios and individual physical activity plans: areas in which technology can supplement instruction and help in managing data. Those statistics in addition to the recent release of updated National Educational Technology Standards for Teachers underscore the importance of developing guidelines for proper technology use in physical education. Technology such as projection systems, smart boards and wireless transmission (WiFi and Bluetooth) allow for the display and transfer of information far beyond the traditional chalkboard. Teachers can enhance physical education instruction by using those tools, provided that set-up and/or implementation don't reduce student activity time. Planning and preparing effectively in advance of lesson presentation is necessary to ensure that these valuable tools become an integrated part of the lesson with minimal transition time and manage. Physical educators must consider which types of physical activity monitoring devices are suitable for students' developmental levels. Using technology to monitor children's heart rate and comparing the data to adult ratios, for example, or having children use pieces of equipment designed for adults can provide invalid information. Teachers should use these tools to enhance instruction only if the data provided are accurate for the grade level to which they are to Using technology for technology's sake might not provide relevant instruction experiences for students, since technology is not the curriculum but rather a tool or device to supplement. When implementing technology, teachers must continue to adhere to the best practice of maximizing participation and success. All students, not only a few should benefit from technology. If not enough heart rate monitors, pedometers, exergames and/or computers are available for all

students to use them simultaneously, teachers should implement station or circuit formats. Instruct Desktop programs such as Microsoft Excel, and Web and CD-ROM software can allow for the collection of data using hand-held computers, with the ability to transfer results to desktop systems quickly. Those technologies can help physical educators determine assessment performance quickly and easily through calculation formulas, and allows them to create and customize individualized fitness plans, as well as offering many other uses. Motion-analysis software and digital video make student performance evaluation easier, thereby enhancing teacher, peer and individual assessment. Many pieces of technology, such as heart rate monitors, pedometers and active games, have the ability to track performance, allowing students to document and monitor their progress. However, physical educators must consider the reliability and validity of such devices when selecting the technologies to use. Students also should be well versed in using the devices, to prevent an increase in management time and a reduction in student activity levels. Implementing technology appropriately into physical education can enhance teaching and learning and contribute to providing a quality physical education program. Technology can aid in content presentation and can help students becoming physically educated individuals who have the knowledge, skills and confidence to enjoy a lifetime of physical activity Practical use of technology in the teaching and learning of physical education opines that the use of technology in the learning process of physical education may not be a goal of its own but it is a tool with which to reach objectives. The following are the uses of technology in learning physical education. Computer Computer is an electronic devise that has the capacity to store, retrieve and process both qualitative and Quantitative information fast and accurately. Computers-we used to produce documents, lesson plans, to convert scores management. It also involves video units PC heart rate monitor, remedy heart rate monitor and educational software. Computer also aid learning experiences when they are used for motion analysis. This involves using computer to examine the way learner moves and then determine ways in which this movement can be improved in a practical physical education class. This devise stresses how human motor abilities can be perfected and controlled. For example if you ask a softball pitcher how he/she throws a fastball, they may not be able to tell you. Motion analysis visually shows the rudiments and sequence of actions involved in arm, leg movements to enhance performance of skills. Video tape images are also transferred into computers. Special application software analyzes the images. It measures the exact angle at which the player s holding his or her arms and lags. The speed and efficiency of each movement is measured. When using images, the teachers, advantage consist in his possibility of making corrections as soon as pupils exercise is completed, which him to quickly progress and improves his learning. Other computer software such as the programmes Professional Evolution Soccer (PES) is used to play games. Learners play, identify appreciate the skills, rules and evaluate officiating of the game. Internet is a global system of interconnected computer networks that promotes free flow of information by pocket switching using the standardized internet protocol suit. It is a network that consist of millions of private and public academic business and government network of local global scope that are linked by copper wires, fiber-optic cables and wireless connections technologies. The internet provides various information resources and services which can be used by physical educators for teaching and learning. They include electronic mail, online chat, electronic transactions, and bulletin board, file transfer and file sharing, online newspapers, arid journals, online gaming and inter linked hype text documents and other resources of the worldwide web. Physical education teachers share experiences with other professionals via the internet which are integrated into teaching lessons. Students explore new knowledge as they surf the web for assignments, chat with fellow students and play games online. The internet can be used to maximize the effectiveness their learning process of physical education. Students have the possibility to email their questions or comments concerning their questions concerning issues in health and audition fitness,

physical education programmes, courses to their physical education teachers and academic staff. Internet is used access a machining list of professionals in the same area of study. A user sends an email message to like mailing list which is broadcast to other users for accessing current information. Examples are the sports philosophy and Questia lists. Chat through the Internet Interactive chat improves communication with experts and colleagues and community members. Chat allows fellow physical educators to simultaneously communicate publicly on your website, internet, extranet. Team members, class and course mates from different locations can easily conduct on line meetings. Colleagues gather together to intimate groups and discuss issues related to physical educations. They could gather in large online events to interact with expert's celebrities, instructors, coaches and teachers can assess chat groups on particular academic issues in physical education and sports. Video Conferencing It allows two or more people at different locations to see and hear each other at the sometime. The communication technology offers new possibilities for sport colleges, libraries including formal instruction to share strategies for coaching sport skills. A very attractive multimedia tool determining students' enthusiastic participation in physical education lessons is represented by the audio aids. Direct or indirect aids such as drums, piano respectively. Radio cassette recorder equipped with CD/DVD can be used to reline the movement pace and get students familiarized, with some sonorous competitive conditions. The digital camera use in the instructive educative process allows a quick verification of students' placement and posture, being at the same time a very good mean to stress body segment positions when performing sonic motor elements. These are the potentials used to enhance teaching and learning of physical education. Challenges of technology using Physical Education Although technology has attractive potentials for improving teaching of physical education, it also has challenges especially in developing nations of the world. Physical educations are not technology compliant. The reports indicate that many do not still appreciate the use of technology in teaching and learning and complaint. Nowadays, it is uncommon to see physical education computers in classroom and on sport playground. These could be either ignorance of technology use or affordability of technology devices. Similarly most educational institution in Nigeria is not providing enough funds for equipping schools with technology devices. Technology devices are becoming more and more mobile and affordable and this could eventually turn into a reality making the study of human movement in physical education a reality. Other challenges include the availability of regular power supply, staff training and development on technology softwares; assessing softwares and packages for teachers. Other challenges include crashing of computers corruption of files. Physical education essentially requires the performing physical activity. This is associated with the development of motor skill. Physical education within the school system requires time, facility space and interactive lesson plans. Technology provides access to information, compresses information, motivate learners, and connect learners to teachers and teacher to the colleagues. There are nowadays many available technological innovations that could be inserted into the physical education lesson. The visual physical education lesson is essentially based on the connected learning environment which uses technology that are networked in structure. Physical education should avail themselves of these technology opportunities to make their lesson more real and dynamic.

The present age is by all accounts lost without the nearness of top of the line innovation which was really unheard couple of decades back. Understudies today, know about cell phones, remote rapid, web associations, information associations and so forth.

Ramifications of the progressions should be tended to:

• The ramifications of such sensational changes in access to innovation among youngsters and youth ought to act naturally apparent in all learning zones.

• Applications in wellbeing and physical training instructional method are accessible and can be connected to enhance and improve curricular contributions in most school settings.

• Numerous innovative applications concentrated on advancing physical movement and wellness is accessible and effectively available.

Utilization of different advances will require new understudy and educator capabilities and practices. Understudies will be required to exhibit competency in fundamental engine abilities and furthermore capability in utilizing innovation.

Openings in the games division

• Developing a biological system for the development of games.

• Research and learning improvement and State Industry commitment.

• Quality Sports training, creating focal point of greatness and advancing games as a full time vocation.

• Efficient Sports occasion association, promoting and the executives.

• Strengthening and professionalizing the Sports Federation.

• Talent exploring and the executives at the grassroots dimension.

• World class sports framework improvement

Sub Unit – II

Professional and other courses of physical education in India. Role of Government agencies monitoring professional courses in physical education.

5.2.1 Professional and other courses of physical education in India.

Physical education is the interdisciplinary study of all areas of science relating to physical knowledge and skills to an individual or a group, the application of these skills, and their results. Physical education is an integral part of the total education process.

Physical Education Trainers tend to focus more on physical fitness activities rather than organised sports. They teach and lead exercise activities for individuals or groups conduct physical training classes; organize games and coach students in games and athletics. Physical Education is involved in the development of programmes for physical education, providing activities which incorporate and develop movement, mobility, control, health, fitness, strength, stamina, challenge, and body skills.

- **B.A. (Physical Education)**

Bachelor of Arts in Physical Education
Total Colleges: 271

- **B.Ed. (Physical Education)**

Bachelor of Education in Physical Education
Total Colleges: 7

- **B.P.Ed.**

Bachelor of Physical Education
Total Colleges: 439

- **M.P.Ed.**

Master of Physical Education
Total Colleges: 177

- **M.Phil. (Physical Education)**

Master of Philosophy in Physical Education
Total Colleges: 44

- **Ph.D. (Physical Education)**

Doctor of Philosophy in Physical Education
Total Colleges: 55

Diploma Course:

- Diploma in Physical Education

Total Colleges: 16

- Post Graduate Diploma in Adapted Physical Education

Total Colleges: 2

- Post Graduate Diploma in Movement Education

Total Colleges: 1

- Post Graduate Diploma in Physical Science

Total Colleges: 1

Certificate Course:

- Certificate in Aerobics

Total Colleges: 3

 Certificate in English

Total Colleges: 25

 Certificate in Physical Education - C.P.Ed.

Total Colleges: 41

 Certified Course in Yog Science

Total Colleges: 5

Some of its specialized fields are -

1. Sports Administration

2. Biomechanics-Kinesiology

3. Coaching

4. Physical Therapy

5. Research

6. Sport Psychology

7. Sport Sociology

8. Sports Medicine

9. Training

10. Measurement-Evaluation

Some Job Types -

- Activities Director
- Athletic Coach
- Cardiovascular Fitness Instructor
- Community/Commercial Recreation
- Corporate Fitness Instructor
- Nutrition Specialist
- Personal Trainer
- Rehabilitation Specialist/Physical Therapist
- Social Director
- Teacher

5.2.2 Role of Government agencies monitoring professional courses in physical education.

The National Council for Teacher Education, in its previous status since 1973, was an advisory body for the Central and State Governments on all matters pertaining to teacher education, with its Secretariat in the Department of Teacher Education of the National Council of Educational Research and Training (NCERT). Despite its commendable work in the academic fields, it could not perform essential regulatory functions, to ensure maintenance of standards in teacher education and preventing proliferation of substandard teacher education institutions. The National Policy on Education (NPE), 1986 and the Programme of Action thereunder, envisaged a National Council for Teacher Education with statutory status and necessary resources as a first step for overhauling the system of teacher education.

The main objective of the NCTE is to achieve planned and coordinated development of the teacher education system throughout the country, the regulation and proper maintenance of Norms and Standards in the teacher education system and for matters connected therewith. The mandate given to the NCTE is very broad and covers the whole gamut of teacher education programmes including research and training of persons for equipping them to teach at pre-primary, primary, secondary and senior secondary stages in schools, and non-formal education, part-time education, adult education and distance (correspondence) education courses.

Functions of Council

It shall be the duty of the Council to take all such steps as it may think fit for ensuring planned and co-ordinated development of teacher education and for the determination and maintenance of standards for teacher education and for the purposes of performing its functions under this Act, the Council may:

a. undertake surveys and studies relating to various aspects of teacher education and publish the result thereof;
b. make recommendations to the Central and State Government, Universities, University Grants Commission and recognised institutions in the matter of preparation of suitable plans and programmes in the field of teacher education;
c. co-ordinate and monitor teacher education and its development in the country;
d. lay down guidelines in respect of minimum qualifications for a person to be employed as a teacher in schools or in recognised institutions;
e. lay down norms for any specified category of courses or trainings in teacher education, including the minimum eligibility criteria for admission thereof, and the method of selection of candidates, duration of the course, course contents and mode of curriculum;
f. lay down guidelines for compliance by recognised institutions, for starting new courses or training, and for providing physical and instructional facilities, staffing pattern and staff qualification;
g. lay down standards in respect of examinations leading to teacher education qualifications, criteria for admission to such examinations and schemes of courses or training;
h. lay down guidelines regarding tuition fees and other fees chargeable by recognised institutions;
i. promote and conduct innovation and research in various areas of teacher education and disseminate the results thereof;
j. examine and review periodically the implementation of the norms, guidelines and standards laid down by the Council, and to suitably advise the recognised institution;
k. evolve suitable performance appraisal system, norms and mechanism for enforcing accountability on recognised institutions;
l. formulate schemes for various levels of teacher education and identify recognised institutions and set up new institutions for teacher development programmes;
m. take all necessary steps to prevent commercialisation of teacher education; and

n. perform such other functions as may be entrusted to it by the Central Government.

Programmes Recognised by NCTE

NCTE notified revised Regulations and Norms and Standards on November 28, 2014 for the following Teacher Education Programmes:

a. Diploma in early childhood education programme leading to Diploma in Preschool Education (DPSE).
b. Elementary teacher education programme leading to Diploma in Elementary Education (D.El.Ed.).
c. Bachelor of elementary teacher education programme leading to Bachelor of Elementary Education (B.El.Ed.) degree.
d. Bachelor of education programme leading to Bachelor of Education (B.Ed.) degree.
e. Master of education programme leading to Master of Education (M.Ed.) degree.
f. Diploma in physical education programme leading to Diploma in Physical Education (D.P.Ed.).
g. Bachelor of physical education programme leading to Bachelor of Physical Education (B.P.Ed.) degree.
h. Master of physical education programme leading to Master of Physical Education (M.P.Ed.) degree.
i. Diploma in elementary education programme through Open and Distance Learning System leading to Diploma in Elementary Education (D.El.Ed.).
j. Bachelor of education programme through Open and Distance Learning System leading to Bachelor of Education (B.Ed.) degree.
k. Diploma in arts education (Visual Arts) programme leading to Diploma in Arts Education (Visual Arts).
l. Diploma in arts education (Performing Arts) programme leading to Diploma in Arts Education (Performing Arts).
m. 4-year Integrated programme leading to B.A.B.Ed./B.Sc.B.Ed. degree.
n. Bachelor of education programme 3-year (Part Time) leading to Bachelor of Education (B.Ed) degree.
o. 3-year Integrated programme leading to B.Ed., M.Ed (Integrated) degree.

NCTE Regulations 2014: Highlights

NCTE completed and notified the revised Regulations 2014, along with Norms and Standards for 15 programmes on November 28, 2014 under Government of India Gazette Notification No.346 (F.No. 51-1/2014/NCTE/N&S) by following the recommendations of the Justice Verma Commission (JVC) appointed by the Government at the instance of the Hon'ble Supreme Court of India. The JVC had suggested wide range reforms in Teacher Education which the new Regulations 2014 have addressed. The new Regulations are an outcome of wider consultations with stakeholders undertaken by NCTE.

The important highlights of Regulations 2014 are as under:

a. A wide basket with 15 programmes is on offer, recognising for the first time three new programmes – 4-year B.A/B.Sc.B.Ed., 3-year B.Ed. (Part-time), and 3-year B.Ed.-M.Ed. programme.
b. The duration of three programmes – B.Ed., B.P.Ed., M.Ed. – has been increased to two years, providing more professional rigour and at par with best international standards.
c. Henceforth, in place of stand-alone institutions, teacher education shall be established in composite institutions (multi-disciplinary or multi-teacher education programmes).

d. Each programme curriculum comprises three components – theory, practicum, internship; and at least 25% of the programme is developed to school-based activities and internship.
e. ICT, Yoga Education, Gender and Disability/Inclusive Education are integral part of each programme curriculum.
f. More integrated teacher education programmes are encouraged.
g. The teacher educator M.Ed. Degree comes with specialization in either Elementary Education or in Secondary/Senior Secondary Education.
h. Open and Distance Learning (ODL) has become more rigorous with built-in quality assurance mechanisms.
i. In-service teachers have more option to acquire higher TE qualifications—DElEd (ODL), B.Ed. (ODL), B.Ed. (Part-Time).
j. NOC from affiliating university/body is mandatory while making an application.
k. Provision of application, payment of fees, visiting team reports, etc. online. Centralized computerized visiting team for transparent use by both HQs and Regional Committees for inspection/monitoring. (For this, E-Governance is in the process of finalization).
l. Each teacher education institution to have compulsory accreditation in every 5 years from an accrediting agency recognized by NCTE. (An MoU has already been signed with NAAC in this regard).

Sub Unit – III

Qualities, qualifications and responsibilities of physical education personnel at primary, secondary and higher education levels. Scope of physical education personnel in the promotion of health, fitness and wellness.

5.3.1 Qualities and responsibilities of physical education personnel at primary, secondary and higher education levels.

Ideally, education should nurture the healthy development of the whole child, including their mind, body and spirit. Although it's not considered one of the core subjects, physical education (PE) is indeed critical for elementary and secondary students. If you have a passion for physical activity, sports and for teaching children, you could make a great physical education teacher. Read more to learn about the important characteristics of a PE teacher.

Interpersonal Skills

PE teachers do hands-on instruction at every class, which means it's essential for them to have advanced interpersonal skills. This goes beyond communication know-how. Interpersonal skills also include the ability to make genuine connections with others, to see things from their perspective, and to be sensitive to the emotional needs of others. Great physical education teachers intuitively understand how to convey respectfulness, positivity and cooperativeness.

Collaboration

Just like teachers of academic subjects, PE teachers work on physical education programs and lesson plans, but great PE teachers collaborate with the students' academic teachers to align physical exercises with the content that they're learning in other classes. They recognize that all students have varying athletic abilities and that sometimes, activities need to be modified to accommodate the topics being addressed by their other teachers. Successful PE teachers should also adapt their instruction style to help every student fully understand key concepts.

Enthusiasm

Students are much more excited about going to class when they know that their teacher is too. Great PE teachers strive to inspire a love of sports and nutrition in their students. They also create a welcoming environment in which every student feels respected and valued, both by the teacher and by other students.

Athletic Ability

Although it isn't necessary for PE teachers to have the physical prowess of professional athletes, they do tend to be physically fit, as it's important to set a good example of health and wellness for the students. PE teachers should also be reasonably skilled at playing the sports they're teaching to the students.

Creativity

Students respond well to teachers who exhibit creativity in lesson planning and implementation. It encourages students to have fun and actively engage in the class. Great physical education teachers aren't afraid to break the mold every now and then. They're willing to try new things, solicit feedback from their students and develop meaningful lesson plans.

Character

Aside from family members, teachers are some of the most influential individuals in a child's life. Students will remember their teachers and the core lessons imparted to them long after they grow up and start careers of their own. As a future PE teacher, your students might not remember everything you say about the rules of flag football or the proper way to block a goal in floor hockey. What they will always remember, however, is the lessons in character you can teach them. These lessons are best taught by example, so strive to model the traits you wish to see in your own students, such as good sportsmanship, respectfulness, empathy and compassion.

Teaching Ability

This is another trait that seems apparent, but a good Physical Educator needs to be able to *educate*. Being able to distill complex ideas into easily followed steps helps your students feel better about physical activity. Being able to teach also includes being able to recognize which students need more encouragement or a different way of explaining, and assessing learning.

Communication

Being able to communicate effectively is another important skill. Clear communications to your students helps them learn your lessons and keeps them safe. Communicating with parents and other professionals respectfully shows how you treat your students in your program. Effective communication builds a sense of community where students feel confident in their abilities. With greater confidence and support, students are more likely to embrace physical activity as a source of fun.

Patience and Adaptability

Patience and adaptability are important to a successful teaching career. Since not all students learn in the same way or the same rate, it's important to stay patient and have different approaches. It's also important to adapt and modify lessons to include students of different levels and abilities. Some schools have no dedicated PE area, so being able to change your lesson plans to adapt to weather or available resources keeps your lesson plans on track.

Organization

As a PE teacher, you might be teaching students who have different ages, physical abilities, and learning styles. In addition, PE teachers often have to work in different areas or even multiple schools. Being organized keeps all of these needs together and easy to manage. Keeping the classes themselves organized keeps them flowing, limits downtime, and lessens chances for conflict and behavior issues. Any PE class involves students, physical area, and equipment, so keeping all of these things organized makes the entire class run smoothly and maximizes learning opportunities.

Focus on the Students

As an educator, you need to make sure your students are learning. Being an educator means you need to have a passion for helping children learn skills they can use in their daily lives outside of the classroom. Working with children can be taxing, so keeping that passion going helps you make your classes instructional and fun. You also need to keep your students safe and secure during class, since they are moving around and in large areas with different equipment.

Physical Qualities

A P.E. teacher must be educated knowledgeable in a variety of sports such as tennis, basketball, football, baseball, softball, rock climbing, aerobics, gymnastics and a host of other disciplines. The quality of recognizing what sports require teamwork and what sports are individual is a P.E. teacher's responsibility. P.E. teachers must be physically fit themselves. They must be mindful of the nutritional needs of the students and teach those nutritional needs.

Patience and Adaptability

Patience and adaptability are important to being successful at teaching. Every pupil has their own unique way of learning, so the 'one size fits all' approach doesn't really work if you genuinely want to enable your students to progress to their full capability. For this reason, it's important that you stay patient when a pupil is having difficulty understanding something, and have the ability to adapt your teaching style to try other approaches to helping your students understand something or participate fully within a session.

Teaching Ability

This is another that seems obviously apparent, but a good quality PE teacher has to have the ability to break a PE lesson down in a way that all students are able to understand , as well as being able to adjust the lesson accordingly to ensure all pupils can take part regardless of the difference of ability levels.

- In a nut cell Physical education need
- Thorough knowledge of subject matter
- High standards of honesty and integrity
- Knowledge of child psychology
- Ability to gain respect and confidence of pupils
- Creative ability
- Capacity for sustained handwork
- Ability to inspire confidence
- Belief in equality of opportunity for everybody
- Knowledge of recent developments in education practice
- Ability to get on well with others
- Good academic record
- Contacts within teaching profession
- Well spoken and well dressed
- Broad cultural knowledge
- Capacity for meticulous attention to detail
- Pleasing manner and appearance

- Maturity of outlook
- Interest in social background of pupils
- Desire to improve the world and society
- Concern for interests and well being of community
- Administrative ability
- Extroverted personality
- Family background in teaching

5.3.2 Qualifications of physical education personnel at primary, secondary and higher education levels.

Qualifications for recruitment of teachers of Physical Education in Educational Institutions mentioned in Section 2 of the Regulations

LEVEL	MINIMUM ACADEMIC AND PROFESSIONAL QUALIFICATIONS
I.Elementary	**(i) Senior Secondary School certificate or Intermediate or its equivalent; and (ii) Certificate in Physical Education (C.P.Ed.) of a duration of not less than two years or its equivalent.**
II Secondary/High School	**Graduate with Bachelor of Physical Education (B.P.Ed.) or its equivalent.**
III Senior Secondary (Physical Education as an elective subject)	**M.P.E./M.P.Ed. (2 year duration)**

Note :

Some of the States are having certificate in physical education courses of one year duration only, while in some other States students passing secondary level examination are admitted to certificate in physical education courses. Such States may, by 2005, conduct certificate in physical education programmes of a duration of not less than two years with admission being open to Senior Secondary / Intermediate pass candidates. In the meantime candidates who have undergone certificate courses in physical education of one year duration or were admitted to such programmes after passing secondary level examination only may be given employment in the concerned States only.

Sub Unit – IV
Recent Government policies for promoting physical education and sports in India.

5.4.1 Recent Government policies for promoting physical education and sports in India

Schemes launched by Narendra Modi Government to promote sports in India

The Union Ministry of Youth Affairs and Sports plays a major role in promoting sports in India. The Sports Authority of India (SAI) that works under the Ministry of Youth Affairs & Sports is responsible for the promotion of Sports and Games in the country. Authority formulates and implements a series of reforms and schemes to boost Sports development. The Government considers that people should involve sports and fitness-related activities in their daily routine for a better and healthier life. Even PM Narendra Modi has on numerous occasions urged people to give priority to sports and games in their everyday life.

Sports play an important role in everyone's life, be it athletes, sportspersons, students, youth or adults. It is essential for physical as well as mental development. Considering the importance of sports, the Government has launched several schemes and initiatives in the field of sports and games. Have a look at some of the schemes:

Fit India Movement

The scheme will be launched on 29 August on the occasion of National Sports Day 2019 by Prime Minister Modi himself at Indira Gandhi Indoor Stadium, New Delhi.

Khelo India Scheme

The Khelo India Scheme was launched in 2016 after the merger of three schemes - Rajiv Gandhi Khel Abhiyan (RGKA), Urban Sports Infrastructure Scheme (USIS) and National Sports Talent Search Scheme (NSTSS). The scheme aims to boost mass participation of youth in annual sports games and competitions. Khelo India (National Programme for Development of Sports Scheme) aims to achieve the twin objectives of mass participation and promotion of excellence in sports. The scheme strives to promote "Sports for All" as well as "Sports for Excellence". The scheme was revamped in the year 2017 with an aim to mainstream sports as a tool for individual and community development, economic development and national development.

Sports Talent Search Portal

Vice President M.Venkaiah Naidu in August 2017 launched the Sports Talent Search Portal to spot the best talent among the youth of India. The portal allows young people to upload their achievements. Applicants who get shortlisted are then called for trials and the qualified candidates then get to take part in the schemes of the Sports Authority of India (SAI).

National Sports Development Fund

The National Sports Development Fund (NSDF) was formed in November 1998 by the then Government to promote sports and games in India. The Fund was established under the Charitable Endowments Act, 1890 to administer the funds for sports activities, tournaments, competitions, infrastructure and training of the sportspersons. The Union Sports Ministry has

recently granted Rs 35 crore from the National Sports Development Fund (NSDF) to Sports Authority of India (SAI) for the training of athletes taking part in the Target Olympic Podium Scheme (TOPS).

High-level committee to address grievances of women sportspersons

In 2017 on the occasion of International Women Day (8 March), the Union Ministry of Youth Affairs and Sports on constituted a committee under the chairmanship of AS & FA to address and resolve the complaints and grievances of women sportsperson. The committee is also comprised of athletes, advocate, a senior officer of the Ministry of Youth Affairs & Sports and a sports journalist. All the members of the Committee are women.

Empowered Steering Committee on Sports

The Empowered Steering Committee (ESC) was constituted in January 2017 on the recommendations of the Olympic Task Force. The Committee is responsible for preparing a comprehensive action plan for effective participation of Indian players in the Olympic Games of 2020 (Tokyo), 2024 (Paris) and 2028 (Los Angeles).

Schemes of Sports Authority of India (SAI)

SAI also runs several schemes for promoting sports at junior and senior levels. The schemes being implemented by the Sports Authority are National Sports Academy (NSA) Scheme, Centre of Excellence Scheme, National Sports Talent Contest Scheme (NSTC), Army Boys Sports Company Scheme, Special Area Games Scheme, and COME and PLAY Scheme. Under the COME and PLAY Scheme, local people are encouraged to play sports and games at the SAI sports centres and trained by SAI Coaches.

National Sports Awards Scheme

Every year, the Government acknowledges and honours sports personalities with the Rajiv Gandhi Khel Ratna, Arjuna Awards, Dhyanchand Awards, and Dronacharya Awards for their achievements and contributions as sportspersons and coaches in the field of sports.

Sports & Games for Persons with Disabilities Scheme

Under this scheme, the differently-abled sportspersons are trained in their field for conducting sports competitions and assisting schools and institutes having differently-abled sportspersons**.**

Promotion of sports amongst School Students under the Samagra Shiksha Scheme

The Department of School Education and Literacy in April 2018 launched an Integrated Scheme for School Education - Samagra Shiksha after merging Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE). Under this new scheme, Sports and Physical Education component is included to provide funds for sports equipment of indoor and outdoor games in all government schools. The scheme aims for the holistic development of children by encouraging their active involvement in Sports, Physical activities, Yoga, and Co-curricular activities.

Target Olympic Podium Scheme

The Sports Ministry launched the ‘Target Olympic Podium (TOP)’ Scheme in May 2015 under the National Sports Development Fund (NSDF) to support the potential medal prospects for Olympic Games of 2016 and 2020. The main focus is given to Athletics, Badminton, Boxing, Archery, Wrestling and Shooting sports.

1. National Sports Talent Contest Scheme (NSTC) - for Sub-Junior level trainees:
National Sports Talent Contest, (NSTC) Scheme is being implemented to **scout sports talent in the age group of 8-14 years** from schools and nurture them into future medal hopes by providing scientific training.
At present there are **14 Regular adopted schools, 10 schools** adopted to promote indigenous games/martial arts. **32 Akharas** adopted being trained? There are a total No. of Trainees 1060 (805 Boys & 255 Girls) trainees under the NSTC Scheme.

2. Army Boys Sports Company Scheme (ABSC) - for Sub-Junior level trainees:
This is a collaborative venture of **SAI with the Indian Army**, The main objective of the Scheme is to make use of the good infrastructure and disciplined environment of the Army **for training boys in the age group of 8-16 years of age**, to achieve excellence in sports. After attaining the required age of seventeen and a half years, the trainees are also offered placement in the Army.
At present, **there are 18 Centres in India** wherein trainees are being trained, in the above-mentioned disciplines. Presently, there are a total of 1049 Boys trainees under the ABSC scheme.

3. SAI Training Centres Scheme (STC) - for Junior level trainees:
Main objectives were to make it possible for the Central Government and State Governments to work together for sports development efforts, through the integration of various Schemes. Correct existing regional imbalances in sports infrastructure in the Country and within a State. Enable SAI to nurture junior sports talent scientifically who had attained excellence at Sub Junior level under NSTC Scheme and induct them into the STCs/Centres of Excellence, for further scientific and in-depth coaching on a long-term basis.
Presently there are **56 STC Centres in the country** having a **total strength of 5394 trainees** (3807 Boys & 1587 Girls).

4. Extension Centre of STC /SAG:
The extension centers of STC/SAG centers Scheme was started to cover schools and colleges for wider coverage in 2005, with a view to developing sports standards in schools and colleges which had the requisite basic infrastructure and had shown good results in sports. Trainees in the age group of 12-18 years are adopted under the Scheme.
At present, there are **70 STC/SAG Extension Centres in the country** with a **total strength of 1183 trainees** (775 Boys & 408 Girls).

5. Special Area Games Scheme (SAG) - for Junior level trainees:
Special Area Games (SAG) Scheme aims at **scouting natural talent for modern competitive sports and games** from inaccessible tribal, rural and coastal areas of the country and nurturing them scientifically for achieving excellence in sports. The Scheme also envisages tapping of talent **from indigenous games and martial arts and also from regions/ communities**, which are either genetically or geographically advantageous for excellence in a particular sports discipline. The main objective of the Scheme is to train meritorious sportspersons in the age group of 12-18 years, with age being relaxed in exceptional cases.
At present, there are **19 SAG Centres in the country having a total strength of 1676 trainees** (961 Boys & 715 Girls).

6. Centre of Excellence Scheme (COX) - for Senior level trainees
As a natural corollary to the **Schemes for Sub-Junior and Junior**, the Scheme of Centres of Excellence was started in 1997. The scheme envisaged induction of sportspersons, who had performed well at Sr. National Competitions, for further advanced scientific training at the Regional Centres of SAI for 330 days in a year. These Centres of Excellence operate as regular coaching camps for the best available talent in India and provide concurrent layers of skilled sportspersons, giving a wider choice of talent and continuity for selection to National Teams and provide alternative second and third options for the National Teams.
At present, there are **15 Centres in the country having a total strength of 556 trainees** (288 Boys & 268 Girls).

7. COME and PLAY Scheme:
The **Come & Play Scheme** was initiated for o**ptimum utilization of SAI sports facilities** in Delhi and across the country, and primarily focussed on **encouraging local sportspersons in areas where SAI sports facilities/Centres are operational**. While providing youth from local communities and sports enthusiasts with an opportunity to train under SAI coaches.
Society for the National Institutes of Physical Education and Sports:
The Society for the National Institutes of Physical Education and Sports (SNIPES), set up in 1965, as an autonomous body to look after the maintenance and administration of the two national Institutes of Physical Education and Sports, namely, the Netaji Subhas National Institute of Sports(NSNIS), Patiala and the Lakshmibai National College of Physical Education (LNCPE), Gwalior and also to, initiate steps for raising the standards of sports and games in the country through the National Coaching Scheme continued to function under the Chairmanship of Dr. Amrik Singh, Secretary of the Association of Indian Universities. SNIPES also carried out advisory functions at the national level in matters relating to promotion of physical education and yoga. SNIPES was last re-constituted for the 3-year term in June, 1979.During the year it held 4 Meetings and its Standing Committees also met to attend to the assignments given to them by SNIPES. Lakshmibai National Institute of Physical Education
The Lakshmibai National College (now Institute) of Physical Education was established by Government of India, on 17th August, 1957, the centenary year of the first war of Independence. The Institute is located at Gwalior where Rani Lakshmibai of Jhansi had lost her life. In recognition of the educational services rendered by the Institute in the field of physical education, sports and research and on the recommendations of the University Grants Commission, the Government of India, Ministry of Human Resource Development (Department of Education) declared this Institute as a “Deemed to be a University”. The primary object of the College, which is one of the two National Institutes established by the Government of India in the field of Physical Education and Sports, is to provide facilities for training of high caliber Physical education teachers for educational institutions and others.

During the year, the College continued to discharge its primary responsibility of offering teacher training programmes at the graduate and post-graduate levels. Set up in 1957, the College is celebrating 1981-82 as its Silver Jubilee year. Since its inception the College has produced 1475 graduates and 472 post-graduates in, physical education. For the academic session 1981-82 with the admission of 114 students to its regular teacher training courses, the total student strength of the College was 370 including 74 women. Besides this programme, the College continued to offer extension services and refresher courses for the in-service personnel, in the field of physical education and sports. Further, it continued to implement on agency basis, the Central programmes like National Physical Fitness Programme, National Prize Competition for the Published Literature on Physical Education and Sports on behalf of the Central Government.

National Physical Fitness Scheme:
The Scheme, which was introduced by the Central Government in 1959,Programme to popularise the concept of physical fitness among the people and also to arouse their enthusiasm for higher' standards of physical fitness and achievement, continued to be implemented during the year in collaboration with the State Governments/Union Territory Administrations and other selected agencies. The Lakshmibai National College of Physical Education, Gwalior, continued to function as the Central agency for implementation of the Scheme.

The 22nd All India Seminar for the State Liaison Officers connected with the implementation of the programme was held at Pachmarhi to review the performance of the programme during the previous year and to formulate the proposals for the current year. The programme was accordingly implemented as per the present pattern during 1981-82 with a total participation target of 20 lakhs. The 21st All India Competition for National Award in Physical Fitness was held at Gwalior in February 1982. A large number of participants from different States and Union Territories took part in the competition.

Physical Education and Promotion of Yoga:
Yoga is based on the complete control of body and mind. The promotion Scheme for Yoga, which is a part of the overall programme of Ministry for development of physical education and sports continued to be implemented during the year as per the existing pattern. The Kaivalayadhama Shreeman Madhava Yoga Mandir Samiti, Lonavala (Pune) continued to be assisted for its maintenance and developmental expenditure for its research and/or teacher training activities in the field of Yoga. The recommendations made by a Review Committee which was, set up to assess the working of the Samiti and to make recommendations with regard to its projected development during the coming years have since been accepted by the Government.

These recommendations include inter alia strengthening of the research and/or teacher training programmes of the Samiti Grants to Physical Education. This Scheme, which has been taken up as an independent Scheme from Teacher Training Institutions 1979-80 onwards, provides for financial assistance to physical education teacher training institutions, both Government as well as non-Government, through the State Governments, to cover 50% of the expenditure on specific projects for improvement of physical facilities in these Institutions like construction of gymnasia, swimming pools, development of play-grounds, and purchase of library books and sports equipment, subject to the ceiling of Central Government grants stipulated for each project. The scheme continued to be implemented during the year in consultation with SNIPES. On the basis of the recommendations made by SNIPES, a revision of the existing pattern of the financial assistance of the scheme so as to make its nature and scope more broad-based and its implementation more effective is under consideration with the Ministry.

The Netaji Subhas National Institute of Sports
(NSNIS) Patiala, established by the Government of India in 1961, along with its Southern Centre located at Bangalore (established in 1975) has been entrusted with the responsibility of training high caliber coaches in various sports disciplines and also to implement, on agency basis, on behalf of the Central Government, the National Coaching Scheme through a countrywide network of Regional Sports Coaching Centres which are being run in collaboration with the State Sports Councils, State Governments and Nehru Yuvak Kendras. The Institute continued to offer regular and condensed coaching courses in various sports disciplines. For the academic session 1981-82, 369 trainee coaches including 25 foreign trainees, were admitted to the regular courses at the Institute, in 16 sports disciplines. Since its

inception in 1961, the Institute has so far produced 5162 coaches including 130 from foreign countries in different disciplines.

Under the National Coaching Scheme of the Institute 23 Regional Coaching Centres are functioning all over the country in collaboration with the State Sports Councils/State Governments. The National Coaching Scheme has now a sanctioned strength of 650 coaches out of which 584coaches are in position including several international and national champions, spread all over the country. Besides its regular coaching programme, the Institute continued to implement, on agency basis, the Central Programmes of National Sports Festival for Women, All India Rural Sports Tournaments, Sports Talent Search Scholarships Scheme on behalf of the Ministry of Education and Culture.

In the context of India's preparations for the IX Asian Games, the Institute has been entrusted with the job of training the national teams for their participation in the Games and also for importing sports equipment for use in training for and in competitions for the Games. The Institute has also requisitioned the services of foreign coaches for the preparation of Indian teams for the Games.

The Institute has also been rendering technical assistance to the Special Organising Committee of the Asian Games in various matters pertaining to India's preparations for the Games. Consequent upon Government approval to the construction of the new complex of the South Centre of the Institute at Bangalore at a total estimated cost of Rs. 2.5 crores, construction programme of the new complex is being formally started. The Eastern Centre of the Institute at Calcutta is also likely to start functioning shortly.

Academics in the Field of Sports

The Sports Authority of India has two functional wings relating to academics which are in the fields of sports and physical education. These are:-Netaji Subhas National Institute of Sports, Patiala (NSNIS) and LNCPE, Trivandrum. (a) Netaji Subhas National Institute of Sports, Patiala The Institute conducts academic courses for training of coaches and looks after research and development in sports related subjects. It conducts 24 months' diploma courses in fifteen sports disciplines and also offers 22 months' specialised post diploma master's course and 1 year post graduate diploma course in sports medicine. NSNIS is the only institute of its kind in the country and has so far trained 11,751 coaches at Patiala and at its centres at Bangalore (established in 1975), Calcutta (1983) and Gandhinagar (1987). In addition, under the Mass Sports Participation Programme, certificate courses of six weeks duration were held at these centres and 15,601 sports instructors have so far been trained. NSNIS is also conducting one year post MBBS Diploma course in sports medicine and 28 doctors have so far qualified. The period of this course has been raised to two year from the academic session 1993- 94. (b) LNCPE, Trivandrum This College was inaugurated in 1984 and is fast developing in terms of infrastructural facilities, academic programmes and other essential requirements. This college offers a 3 year Bachelor of Physical Education (BPE) and 2 years M.PE degree courses. One hundred and forty six students (67 boys and 59 girls) are at present studying in the college. Upto the academic year 1995-96, 270 students have passed out from the college.

Promotion of Sports Grants to State Sport Councils In consultation with, and on the recommendation of the All India Council of Sports, financial assistance under the Scheme, as per the approved Pattern and in accordance with the order of priority laid down by the Council, was released to the State Sports Councils in States and Union Territories during the past years for development of following facilities (i) Organisation of State level coaching camps; (ii) Maintenance of existing Rural Sports Centres and establishment of new Centres;

(iii) Financial assistance for purchase of sports equipment; (iv) Development of play-fields; (v) Construction of stadium; and (vi) Construction of swimming pools.

National Sports Organisation

The Scheme, which is being implemented through the University Grants Commission, Association of Indian Universities and the Netaji Subhas National Institute of Sports, aims at improving sports standards among college and university students and helping the talented sportsmen and women to achieve excellence in their respective sports disciplines. Whereas financial assistance is given through the University Grants Commission for construction of Gymnasia, development of play-fields etc. in colleges and Universities, the Association of Indian Universities have been entrusted with the job of organising coaching-cum-sports competitions among the college and university students. Similarly, 100 scholarships annually of the value

Of Rs. 1200 per annum per student are' being awarded through the Netaji Subhas National Institute of Sports to outstanding College and University sportsmen and women.

Grants to National Sports

The National Sports Federations /Associations are autonomous bodies Federations/Associations engaged in the promotion of sports and game' in general and their competitive aspect in particular. During the past years National Sports Federations/Associations continued to be assisted for various purposes viz.

(i) Grant of passage cost to National Sports Federations for deputing teams abroad for participation in international fixtures;

(ii) Holding of National Coaching Camps for preparing national teams for their participation in international events; (iii) Holding of Annual Coaching Camps;

(iv) Receiving sports teams from abroad and sending Indian teams abroad.

All India Rural Sports Tournaments

The country-wide programme of Rural Sports Tournaments was launched by the Central Government in 1970-71 with the twin object of involving a major segment of our youth in rural areas into the main stream of the country's sports activities and also to spot and nurture sports talent. The Programme at present involves an annual participation of about 15 lakhs rural youth right from the block level up to, the National level. The programme is being organised, by the Netaji Subhas National Institute of Sports, on agency basis, on behalf of the Government.

International Sport Development Agreement Confirmed For India:

UK Sport and the Government of India's Ministry of Youth Affairs and Sport signed a Memorandum of Understanding in New Delhi recently which marks the start of an international sport development partnership that will reach thousands of school children and communities throughout India. The agreement brings together national and international experts in the fields of development, physical education, sport development and sporting excellence to provide access to quality physical education and sport at community level and the development of pathways to excellence for elite athletes. This new commitment between both nations was sealed by Richard Stagg, British High Commissioner to India, and S. K. Arora, Secretary of the Ministry of Youth Affairs and Sport. The ceremony was also attended by Mr Mani Shankar, the Government of India's Minister of Youth Affairs and Sports, who is currently leading the finalising a new national sports policy. The partnership agreement offers both parties a unique

opportunity to share best practice methods and expertise, while also allowing those involved in sport in the UK to keep up to date with the latest international developments. UK Sport's Head of Worldwide Impact, Debbie Lye, confirmed that as a sporting nation India has an important role to play internationally in youth development through sport and future legacy planning for the hosting of international sporting events. The programmes initiatives commenced shortly with an inward visit to the UK by key organisations involved in physical education and school sport in India. This will be one of the first steps in supporting the programmes vision of developing sustainable and supportive systems within which children and young people of all abilities can enrich their lives by playing and excelling in sport.

Some Schemes and Incentives for promotion of sports activities in India

- Cash Awards to Winners of Medals in International Sports Events
- Sports Talent Search Scholarship Scheme
- Scholarships for Training of Specialists and Outstanding Sportspersons
- Sports Fund for Pension to Meritorious Sportspersons
- National Welfare Fund for Sportspersons
- Travel Grant to Sports Specialists
- Promotion of Sports and Physical Education among Women
- Rural Sports Programme
- Rural Sports Clubs
- North Eastern Sports Festival
- Dr. B R. Ambedkar Rural Sports Tournaments
- National Sports Festival for Women
- Evaluation of Sports Schemes
- Exchange of Sports and Physical Education Teams/Experts
- SAF Games,

National Sports Policy for India

It will thus be seen that at the time of the formulation of our constitution, "sports" were seen as a form of recreation and little more, on par with "entertainment and amusements". The role of sport's in national development requires to be redefined to accord to sport's that critical role in youth development which is prerequisite of accelerated and inclusive national development.

Physical education and sport's have been receiving support under Successive Five Year Plans, but received attention as a subject of policy only after India hosted the IXth Asian Games in 1982. The National Sports Policy, 1984 was the first move towards developing a conducive policy framework for the development and promotion of sport's in our country. The implementation of the National Sports Policy, 2001, that focuses on excellence and broad basing of sporting activities. The policy seeks to realise the unfulfilled objectives of the earlier government guidelines on sports which were included in the National Education Policy of 1986, "It was felt that many objectives contained in the National Education Policy remained substantially unrealised. Therefore, in order to tackle emerging trends in sports the NSP has been formulated, The policy focusses on enhanced participation of women tribals and rural youth in sporting activities and encouragement to traditional games like archery, kabaddi and kho-kho.

The NSP proposes to set up specialised sports schools in various parts of the country and make physical education compulsory in school curricula till the secondary stage, The development and upgradation of infrastructure is sought to be given a filip and incentives have been announced to attract corporate involvement in sporting activities. Companies would be provided 100 per cent tax concession on money spent on promotion of sports as assured by Finance Minister Yashwant Sinha (in 2001) earlier.

There was an urgent need to tap sporting talent from rural and tribal areas and the Centre would supplement the efforts of state governments in achieving this aim, "The Panchayati Raj institutions will also be involved in promotion of sports at the grassroots level and developing the required infrastructure, adding special emphasis would be given on encouraging sporting activities in the North-Eastern states. The policy also seeks to strengthen scientific coaching and provides for incentives to sportspersons who excel at the national and international levels. The policy, based on the recommendations of A.K. Pandya Committee submitted in 1984, envisages government support to all the national federations and other agencies involved in promoting sporting activities and the combining of sports with tourism. The Ministry of Youth Affairs & Sports proposes to have a national consultation on the draft comprehensive National Sports policy in 2007.The 2007 Sport's Policy fully recognizes the contribution of physical education and sport to personal development, especially youth development, community development, health and well-being, education, economic development and entertainment, and in the promotion of international peace and brotherhood, which is the spirit of olympism. The Comprehensive National Sport Policy 2007 aims at the making the framework for sports in India more effective and inclusion with the full ownership and involvement of all stakeholder's. The policy aims at adopting a holistic approach to sports developments taking into account the health benefits, recreation benefits, education benefits, social benefits, economic benefits and source of national pride that it offers. So the need to require a alignment of responsibilities between the Union and State Government and the Indian Olympic Association, the Sports Authority of India, the National Sports Federation and their affiliated bodies at the state and district level, and corporate bodies. All of this in turn might require Constitutional changes and elaboration of a suitable legal framework.

Limitations in the field

The investment made by most of the states in sports has been negligible, although a few states have shown the way to according a high priority to sport's. In consequence, we have not succeeded in providing universal access to sports, or creating a national sports culture, thus also impairing excellence in sports. It is estimated that out of a population below 35 year's of some 77 crore, only 5 crore or so have any access to organized sports and games, to the neglect of nearly 72 crore of our children, adolescents and youth. Serious concern at this state of affairs has been expressed in various Parliamentary Committee Report's. Despite these Report's there has been little progress made in taking organized sports and games to children in rural India or in involving Panchayats in the promotion of such sport's and game's. The Parliament Standing Committee on Human Resources Development studied a wide range of issues concerning sports in 1998 and emphasized the need for bringing about reform's in sports management and governance in order to make it more dynamic, responsive, responsible and result oriented. Some of the major problem identified by the Committee includes:

- Lack of sport's culture in the country
- The non integration of sport's with the formal education system
- The lack of coordination between all stakeholders
- The inadequacy of sport's infrastructure
- The inadequate participation of women in sport's
- The lack of effective sport's system for talent identification and training and fair selection of teams

Conclusion

India expects its citizens to have the qualities of true sportsmen. If we all acquire these qualities, there will be no narrow-mindness, no corruption, and no injustice. There will be independence in the real sense of the word. India, in recent years, has been making proactive efforts to host

several mega sporting events. After hosting the Afro-Asian Games in2003 at Hyderabad and the World Military Games in year2007 at Hyderabad. The Commonwealth Youth Games will be held in this (2008) year at Pune, which will be followed by the Commonwealth Games in2010 at Delhi.

There is an immediate need to create a network of basic sport's infrastructure throughout the country and ensure proper access to it to enable more people to participate in sports thereby broadening our base for scouting of talent. The Working Group on Youth Affair's and Sports for the Formulation of Eleventh Five Year Plan also emphasized the need to strengthen the institutional frame work for the development of sports in the country. The development of sports and physical education as an essential ingredient of youth development and the promotion of a sports culture in our country. It also look's at other countries such as Cuba and China, where sport's and youth development, have been integrated in such a manner that they have made great progress in achieving the twin objectives of broad-basing sport's and achieving excellence in individual disciplines.

The Government plays a major role in promoting and developing sports in a country. The Government and Governmental organizations constitute the Public Sector of the sports industry which is responsible for making sports policies, allocating funds for developing infrastructure, nurturing talents, designing specialized programmes like dope control etc. The Planning Commission of India estimates that the country will be the home of approximately 510 million people of the age group of 15 to 35 years by 2016. The role of Government, therefore, is extremely important in providing participation opportunities to the youth of India for the overall development of sports.
1982 was a landmark year in Indian sports when India organized the Asian Games. Prior to 1982, hardly any emphasis had been given to sports in Public Policies. Funds had been allocated to sports in different Five Year Plans, mainly for building infrastructure and nurturing talents at the grass root level.

Five Year Plans	**Thrust Areas**
2nd Five Year Plan	Developing sports infrastructure
3rd Five Year Plan	Grass root developmental activities
4th Five Year Plan	Grass root developmental activities
5th Five Year Plan	Carried forward the initiatives of 4th Five Year Plan
6th Five Year Plan	Selecting and nurturing young sporting talents across the country
7th Five Year Plan	Building sports infrastructure at the grass root level
8th Five Year Plan	Consolidating the initiatives adopted in the 7th Five Year Plan by introducing a number of schemes, such as Special Area Games (SAG), Sports Project Development Area Centres (SPDA etc.)
9th Five Year Plan	Developing sports talents

10th Five Year Plan	Making the Comprehensive Sports Policy with three main objectives: "Sports for All", "Excellence in Sports" and "Contingent Constitutional, Legal and Institutional measures to implement the policy".

An increase in allocation of funds for Sports in different Five Year Plans can be observed from the following table:

Five Year Plans	**Allocation (INR million)**
Sixth Five Year Plan (1980- 1985)	270
Seventh Five Year Plan (1985- 1989)	2,070
Eighth Five Year Plan (1992-1997)	2,100
Ninth Five Year Plan (1997- 2002)	4,730
Tenth Five Year Plan (2002- 2007)	11,450
Eleventh Five Year Plan (2007-2012)	46,360

In spite of a significant increase in the allocation of fund, it is important to note that not more than one percent of total budget is allocated to sports. Hence, there is a scope of improvement in terms of fund allocation for the promotion and development of sports in this country.

Considering the developmental aspect of sports, the Panchyat Yuva Krida Aur Khel Abhiyan (PYKKA) had been introduced to generate sports culture at the grass root level. The objectives of the scheme are to provide sports infrastructure/ equipment's at the Panchyat level and to encourage youth in rural areas to participate in sports. Various competitions are organized from block level to national level to achieve these objectives. Rs. 1,500 crore has been approved by the Planning Commission for this project in the 11th Five Year Plan and a budgetary allocation of Rs. 92 crore was provided in the scheme for 2008-09 while Rs. 160 crore was provided for 2009-10.

The effectiveness of these initiatives should be evaluated on the basis of the success of Indian athletes at the international level. It is relevant to mention that the result is not enough convincing. Therefore, a few recommendations can be made for making the system more effective.

i) The allocation of funds to sport, as a percentage of budget, can be increased for broad-basing sports in this country.

ii) Periodic evaluation of various projects initiated by the Government and Governmental organizations for making those initiatives more effective.

iii) Integration of sports with education to introduce sports culture in India.

iv) Sports is a state subject and therefore uniformity in sports specific activities of various states in India is extremely important for providing equal sporting opportunities to all the citizens of the country.

v) A structure of good governance should be incorporated to make the system transparent and accountable.

Sub Unit – V

Hierarchy of organizational set-up in physical education at schools, colleges and university level.

5.5.1 Hierarchy of organizational set-up in physical education at schools level.

Physical education became a subject matter in schools (in the form of German and Swedish gymnastics) at the beginning of the 19th century (Hackensmith, 1966). Its role in human health was quickly recognized. By the turn of the 20th century, personal hygiene and exercise for bodily health were incorporated in the physical education curriculum as the major learning outcomes for students (Weston, 1962). The exclusive focus on health, however, was criticized by educator Thomas Wood (1913); Wood and Cassidy, 1930) as too narrow and detrimental to the development of the whole child. The education community subsequently adopted Wood's inclusive approach to physical education whereby fundamental movements and physical skills for games and sports were incorporated as the major instructional content. During the past 15 years, physical education has once again evolved to connect body movement to its consequences (e.g., physical activity and health), teaching children the science of healthful living and skills needed for an active lifestyle (NASPE, 2004). Sallis and McKenzie (1991) published a landmark paper stating that physical education is education content using a "comprehensive but physically active approach that involves teaching social, cognitive, and physical skills, and achieving other goals through movement". This perspective is also emphasized by Siedentop (2009), who states that physical education is education through the physical. Sallis and McKenzie (1991) stress two main goals of physical education: (1) prepare children and youth for a lifetime of physical activity and (2) engage them in physical activity during physical education. These goals represent the lifelong benefits of health-enhancing physical education that enable children and adolescents to become active adults throughout their lives.

Lafinhan, (2002) said that Physical Education is part of the students' total education at elementary school, middle school, secondary school, college and university levels (6-3-3-4) i.e. 6 years for elementary, 3 for junior secondary school, 3 for senior secondary school and 4 for Tertiary institution. And these progress sequentially. At each level there is a particular organizational structure which is designed to assist in achieving a particular goal. 2.1 Elementary This is referred to as education given in an institution for children aged 6- 11 years plus. Primary Education in Nigeria is compulsory, universal and free. All the subjects in the primary education curriculum including Physical and Health education are offered as core-subjects (National Policy on Education, 2004). Between these ages, the emphasis is to create an atmosphere of fun and enjoyment that will attract and develop the pupil affection to wanting to continue in sport. The Physical Education activities are to enable the pupils to use his body in different ways and at the same time gain control over his body in space (Alla and Olorunsola, 2008). The proposed organizational structure is shown in fig.1 below. In Nigeria, there is no Physical Education Specialist in the elementary school unless in private schools. The district consultant (inspector of education in Nigeria) who is a Physical Education specialist periodically advises the elementary classroom teacher. A district consultant however, may or may not be provided when there is a department of Physical Education. The elementary school level includes Kindergarten through eight grade or sixth grade as the case may be. At this level, many schools have changed from a traditional curriculum of self-contained classrooms to open or non-graded classes and from less emphasis on low-organized games, relays and combative skills to more emphasis on rhythms and movement education. Physical Education at this level

is scheduled for 30 minutes twice a week. The teacher's schedule ranges from 8 – 10 periods daily. Boys and girls in grades one through six come to the field as a heterogeneous group (co-educational) of about 20 – 30 pupils in one class. Pupils are offered a broad range of activities that allow them to experience a variety of skills (Adeniji, 2007). Physical Education is not enforced in all the elementary schools in Nigeria. Where it is enforced, it is not usually formally organized. Though many schools may insert it on the Time Table, teachers do not usually consider it very serious. The problem might be due partly to the fact that the system has not formally stressed it or school administrators have not agreed or admitted it into the school system (Mgbor, 2006). 2.2 Secondary Schools 2.2.1 Junior High School Secondary School Education is the form of education children receive after primary education and before the tertiary level. The broad goal of secondary education is to prepare the individual for useful living within the society and higher education. It is also indicated in the National Policy on Education that the Junior Secondary shall be both pre-vocational and academic. It shall be tuition free, universal and compulsory. Physical Education at this level is placed as a non-vocational elective. However, some states in the country make it compulsory elective for Junior Secondary School students. The curriculum contents appear similar for the three levels except that in JSS II and III there is the inclusion of career guidance in Physical and Health Education. In many schools in Nigeria, Physical Education is usually a section under the sciences. Generally, a Physical Education teacher in this level teaches six to eight class periods per day and each period is from 45 to 50 minutes in lengths and contact period with each class ranges from two or three times per week with about 30 to 50 students in a class. The need of students at this level is met through individual and team sports. Also opportunity for competition is provided through intramural and inter-scholastic meetings. These programmes are regarded as integral part of the Physical Education programme. Supervision of these programmes is included in the general teaching assignment. 2.2.2 Senior High School The Senior Secondary School is recognized to be comprehensive with a core-curriculum designed to broaden pupils' knowledge and out-look (National Policy on Education, 2004). Physical and Health Education is offered as non-vocational elective options. Since this stage does not come under the National Basic Education Concept, the Federal Government appears silent about developing its curriculum for secondary schools. Physical education teachers, however, use the syllabus prepared by the West African Senior School Certificate Examination (WASSCE). In India we find following administrative set up;

President of School Managing Committee
I
Head Master of the School
I
Physical Education Teacher
I
Other Teaching and Non teaching Staff of the school
I
Selected Students from Higher Classes of the School

5.5.2 Hierarchy of organizational set-up in physical education at college level.

According to Fordham and Leaf (1978), a college can differ from a university in title, organizational structure, size and curriculum. A college is usually organized into divisions, schools and departments. For example, a college has the division of liberal arts and sciences that contain the school of education in which there is a department of Physical Education. A university includes colleges, divisions, schools and departments. For instance, at a University there is the college of Health, Physical Education and Recreation, which includes the division of athletics and department of Physical Education. In the University, students are of different backgrounds, experiences, interests, needs and goals. Students may obtain bachelors, masters or doctorate degrees. At this stage, students pursuing bachelor's degree may enroll in Physical Education to meet a requirement or as an elective, but medical reasons, military service, age or athletic participation may serve to exempt students form required Physical Education. Here, also there are general programmes for those not majoring in Physical Education and Professional programme for those majoring in Physical Education. In Fig. 3 below is the organizational structure of Physical and Health Education of College/University P.E according to Forham and Leaf, (1978). Where Physical Education is separated from Sports Administration, sports (Intramural and Interscholastic) rests on the Sports Council and its Director has direct communication link with the Vice-Chancellor. In a recent study conducted by Olorunsola and Alla (2005), four models of sports management were observed in Nigeria Universities Model – 1 Sports Committee Management; Model 2 Sports Council or Sports Committee Management; Model 3 – Sports Council which has access to the Vice Chancellor through the Dean of Student Affairs and Model 4 – Sports Council which has direct access to the Vice-Chancellor. Apart from the sporting activities that are being organized on individual College or University basis, there are the inter-collegiate sports called Nigeria University Games Association (NUGA), Nigeria Polytechnic Games Association (NIPOGA) and Nigeria Colleges of Education Games Association (NACEGA).

In India following administrative set up is found:

President of Governing Body of the College

I

Principal of the College

I

Head of the Department
(Department of Physical Education)

I

Teaching and Non teaching Staff of the other Department of the College including Department of Physical Education

I

Selected Students from Higher Classes of Various Department of the College

5.5.3 Hierarchy of organizational set-up in physical education at university level

In every University sports administration is one of the major components of the general administration. The Vice Chancellor, who is the head of the university, heads the policy making committee on sports for which Vice Chancellor is assisted by a sports advisory committee and physical education department. The sports advisory committee and physical education department generally approves the budgets and programmes of the directorates of physical education. The organisational structure in the university is headed by the Director of physical

education. The organisational structure in the Universities is headed by the director of physical education, whose job analysis is as follows: Organisation in order to function most effectively must have some type of machinery to help them to run effectively, to organize and execute their affairs to keep them functioning smoothly so that the goal for which they have been created will be achieved the machinery is administration. It is the frame work of organisation8 The financial resources, infrastructure facilities and technical expertise working in the field sports and Physical Education to improve the standard of sports and to contribute to the all round development of the youth and his personality. It is true that physical education contributes to develop qualities like team spirit and sportsmanship. At the same time it should not be forgotten that today sports has become more professional and materialistic in their approach and attitude. The present day world affords opportunities to youth excelling in sports. Recognition through sports has been accepted by the society. Social acceptance, recognition, avenues to explore new opportunities has made the youth to take up sports and achieve new greater height. The university administration should take this concept in the right spirit and make effort to provide opportunities for the youth to excel in sports. Universities should chalk out proper plan of action through organized and planned sports, competitions, long and shortterm coaching programmes. Organisation and administration of university sports should have a sound organisational structure, administration including qualified staff. Infrastructure facilities and financial support is imperative for the conduct of competitive activities at university level. Opportunity will help the student community to become competitive. Competitive sports provide living experience in education; physical education and sports activities mould them into decision makers and help them to take responsibilities. They also promote team sports. Inter university competitions provide opportunities to students with special talent to develop further and utilizes the same talents fully in organized competitions with the students of similar abilities from other universities. The well organised and well conducted inter university competitions are potent tools for accomplishing of educational objectives in universities. They provide an opportunity for youth to achieve total fitness, to serve as a means of motivation to wholesome, vigorous, and challenging activities which can be used throughout life. They allow each one to develop skills in sports suited to his/her individual choice; interest and ability to provide a wholesome means for the release of tension. Realising the importance of playground in India, Swami Vivekananda once said, “India needs playgrounds, not Bhagwat Geetha.” The quality of sportsmanship, co-operation, courage, unity, scarifies and leadership can be created better in playfield than in classroom. The planning process is important, as a first step, the need of a new facility must be clearly established. The need must be based on factors such as departmental philosophy, educational goals, and student’s interest, community use and future projections. The physical education facility must be an integral part of the school or campus master plan. It is also important to determine the architect’s interest and experience in designing a physical education facility. The aim of physical education, which is so inclusive that it might also serve as the aim of all education, is stated below: It is individual experience that influences the limits of the capacity which helps individual to adjust successfully in society, to increases and improve his/her wishes and to develop the ability to satisfy his/her wishes. And it also requires close supervision of the facilities, materials, supplies and equipments essential to the organisation. Sound organisation and administration are concerned with setting up or planning the total purpose and activities of the department or unit and carrying these out to the end so that all important aspect is accomplished. In the physical education department the major phase with which organisation and administration is concerned with the functions and responsibilities essential to the achievement of established goals, through associated effort. It is also concerned with the group of individual who are responsible for directing, guiding, coordinating and inspiring the associated effort of individual members so that the purpose for which an organistion can be

effective and efficient. For the development of sports and physical education at the university level, the university is expected to accomplish the purpose of the organisation with the staff, facilities, equipment and finance available. Society is not static, when society changes educational goals changes. Very often these changes are inhibited or enhanced by the type of facilities that are available in the universities. New facilities if they are to be adequately designed for the future must be considered in relation to the trends in education in general and physical education athletics in particular. Sports are important elements in modern society. Sports and games are influenced by changes that occur within our society. In today's modern society sports play very important role in spreading sports awareness through media attention & technology. There is also alternative sports experience having immediate enjoyment, relaxation as its main characteristics. The sports participation by the students will increase demands with regard to sportsinfrastructure, sideline activities, swimming pools that are all needed to adjust to the standards of the various sports disciplines. The Deshmukh committee has made the following recommendation. Certain norms should be developed to ensure optimum utilization of the available resources. It is necessary that each college should aim at having five to ten acres of land for play grounds. Each university should have at least two cricket fields, two hockey fields, two football field, four basketball courts, six volleyball court, twelve tennis courts, a sports stadium with the running track, a cricket pavilion and gymnasium hall for gymnastics, badminton, table tennis and wrestling. Similarly each college should have at least one cricket field, one hockey field, one football field, two basketball courts, two tennis courts, a sports stadium with running track, swimming pool and a gymnasium hall." There are more than 740 universities and thousands of colleges in India. The cream of the youth community is studying in the universities. It is however a pity that more than 740 universities have not done enough justification, hardly few youth are available to represent their existence as the number of sports persons they have given to the country is very low. This may be due to lack of proper administration of sports in general and University sports in particular. Youth at university level reach the peak of physiological and psychological maturity and at this level a well balanced psycho-physical unit is deemed essential. If proper training, coaching, infrastructure facilities, equipment, time are given there is no doubt in reaching the heights in the field of sports and games. Physical education plays an important role in educating the students. Physical education contributes directly to development of physical fitness. Physical education also helps students understand the value of leading a physically active lifestyle. The physical education can affect both academic learning and physical activity patterns of students if the students are physically fit. The healthy, physically active student is more likely to be academically successful, motivated and alert. In the preschool and primary years, active physical activities have positive effect on motor abilities and cognitive development of the students. Quality physical education programs in our nation's schools are essential for developing motor skills, physical fitness and understanding of concepts that foster lifelong healthy lifestyles. Throughout the school years, quality physical education programme can promote social, cooperative and problem solving competencies. As children grow older and enter into the adolescence age, physical activity may enhance the development of a positive self-concept as well as the ability to pursue intellectual, social and emotional challenges. Physical education plays a vital role in achieving the all round development of the personality of the present day youth at the university level. In India the Universities offers the necessary physical education training to the students which act as a nucleus in building the student character. On the other hand physical education helps in improving the standard of sports in our country. To offer a valid physical education and sports, adequate resources like staff and facilities are needed to implement the programme successfully. The physical education programme should be administered properly. Physical education and sports administration are especially concerned with achievement – proof that the organisation is attempting its goal.

Achieving these results satisfactorily requires an understanding of human relationship and the ability to foresee the future and plan for any eventuality and its demands that is the capacity to coordinate with human personalities. In India following administrative set up has found:

Vice Chancellor
I
Head of the Department
(Department of Physical Education)
I
Sports Board of University
I
Teaching and Non teaching Faculty of the other Department of the University including Department of Physical Education
I
Selected Students from different Classes of Various Department of the University

Sub Unit – VI

Role of public & private sectors in the promotion of physical education and sports in the country.

5.6. Role of public & private sectors in the promotion of physical education and sports in the country.

Today sport emerges as an important component of socio-economic development of a country. The active participation in sports improves community health and productivity, reduces medical expenses, imbibes discipline in character and enhances social cohesion. The execution of a mega sporting event helps in developing infrastructure, generating employment, securing inflow of foreign capital and thus contributes significantly to the economic development of a country. Therefore, it can be said that the impact of sports on the society is multi-dimensional.

The government plays a crucial role in promoting sports in a country. The government and governmental organizations constitute the public sector of the sports industry, which is responsible in making sports policies, allocating grants for developing infrastructure, nurturing talents and designing specialized programmes for overall development of sports. The objective of this article is to discuss critically the role of government in promoting sports in India.

The year 1982 was significant in the history of sports in India. In that year, India organized the Asian Games for the first time. Prior to that, not much emphasis had been given to sports in public policies. The following table represents the gradual increase in fund allocation for sports since the sixth Five Year Plan:

Five Year Plan	Duration	Allocation for Sports (INR million)
6th	1980-1985	270
7th	1985-1989	2,070
8th	1992-1997	2,100
9th	1997-2002	4,730
10th	2002-2007	11,450
11th	2007-2012	46,360

Despite a significant increase in the fund allocation, it is pertinent to mention that not more than 1% of budgetary allocation has been directed to sports in India.

The Panchyat Yuva Krida Aur Khel Abhiyan (PYKKA) had been introduced to inculcate sports culture at the grass-root level by encouraging the youth of village and district levels to participate in sports. To achieve this objective, Rs. 1500 crore had been approved by the Planning Commission of India in the eleventh Five Year Plan and Rs. 92 crore and Rs. 160 crore had already been allocated for 2008-2009 and 2009-2010 respectively.

Despite these efforts, the performance of Indian athletes at the international level is not very convincing. Therefore, a few steps may be recommended to make these initiatives more comprehensive. First, the allocation of funds, as the percentage of budget, should be increased to broad-base sports in the country. Second, sports should be made as an integral part of the education system to inculcate sports culture from the school level. Third, the effectiveness of the developmental projects should be evaluated periodically. Fourth, uniformity should be maintained in sports specific activities of various states of India to provide equal participation

opportunity to its citizens. Finally, a structure of good governance should be incorporated to make the system transparent and accountable.

To revive sports culture, the government should revisit the sporting framework of India. Otherwise, the immense potential of the country in sports can never be realized. It can be expected that the government will play a proactive role in promoting sports in India to establish the country as a sporting nation.

Role of Sports Federation for Promotion of Games and Sports Various sports Federations and Associations for different games and sports came into existence after independence. These federations have played a vital role in promotion of games and sports in our country. They have their constitutions in States and Districts for the promotion and the development of games and sports at different levels. These Federations/Associations conduct national championships in their respective games and sports and they select the national teams. The Sports Federations/Associations are affiliated to the Olympic Association. Some of National Federations/Associations in India are as under:

1. India Olympic Association
2. Archery Association of India
3. Amateur Athletics Federation of India
4. Badminton Association of India
5. Basketball Federation of India
6. Billiards and Snooker Federation of India
7. Indian Body Building Federation
8. Indian Amateur Boxing Federation
9. Indian Amateur Boxing Federation
10. Bridge Federation of India
11. All India Carrom Federation
12. All India Chess Federation 13. Board of Control for Cricket in India
14. Women's Cricket Association of India
15. Cycling Federation of India
16. Equestrian Federation of India
17. All India Football Federation
18. The Indian Golf Union
19. Gymnastics Federation of India
20. Indian Hockey Federation
21. Indian Women's Hockey Federation
22. Judo Federation of India
23. Amateur Kabbadi Federation of India
24. Kho-kho Federation of India
25. Indian Power Lifting Federation
26. National Rifle Federation of India
27. Rowing Federation of India
28. Squash Racket Federation of India
29. Swimming Federation of India
30. Table Tennis Federation of India
31. Taekwando Federation of India
32. All India Tennis Association
33. Volleyball Federation of India
34. Indian Weightlifting Federation

35. Wrestling Federation of India
36. Indian Style Wrestling Federation
37. Yachting Association of India
38. Indian Kayaking and Canoeing Association
39. Apart from these there are also special sports bodies at the National level that have their separate entities.
40. The National Equestrian Association
41. The Service Sports Control Board
42. The School Games Federation of India
43. The Inter-University Board of Sports
44. The Railway Sports Control Board
45. The All India Police Sports Council Board etc.

Associations and Agencies Associations and Agencies conduct different competitions at National and International levels. In India a number of agencies have been established with a view to promote physical education and sports at various levels. Particular of some of these important agencies established and working to serve this purpose are given blow:- Agencies at National Level

1. Indian Olympic Association (IOA)
2. All India Council of Sports (AICS)
3. School Games Federation of India (SGFI)
4. National Association and Federation of different games and sports
5. Nehru Yuvak Kendras
6. Society of National Institutes of Physical Education and Sports (SNIPES) Supervising Netaji Subhash National Institues of Sports (NSNIS) and Laxmibai National college of Physical Education (LNCPE)
7. The Services Sports Control Board
8. The All India Police Sports Control Board
9. The Post and Telegraphs Sports Board
10. Sports Ministry of Central level and State level 11. Sports Authority of India

1957 The Lakshmibai National Institute of Physical Education established initially as college.

1961 The Arjuna Award instituted.

1969 National Service Scheme (NSS) launched (2 October).

1970-71 Rural Sports programme launched. Sports Talent Search Scholarship Scheme launched.

1972 Nehru Yuva Kendras came into operation for improving the personnel and employment capability of non-students and rural youth.

1977-78 The National Service Volunteer Scheme launched.

1982 National Welfare Fund for sportspersons and their families set up.

1984 The Department of Sports re-designated as the Department of Youth Affairs and Sports.

The Sports Authority of India (SAI) set up.

1986-87 Assistance to Youth Club scheme started.

1988 National Youth Policy evolved and tabled in the Parliament.

1991-92 Rajiv Gandhi Khel Ratna Award scheme launched.

1994 Sports Fund for Pension to Meritorious Sportspersons Scheme launched.

1994-95 Scheme for setting up of Youth Development Centres for a group of 10 villages each introduced.

1999 The Fifth National Youth Festival formally inaugurated by the Prime Minister in Lucknow (12 January)

Role of public and private sector in India:

Government of India also time to time, taking various steps and initiatives to promote good governance practices in the management of sports at the national level in pursuance of successive National Sports Policies. These policies are based on the Basic Universal Principles of Good Governance of Olympic and Sports movement and do not, in any manner, contradict or interfere with the autonomy of the national sports bodies in discharging their functions and duties in accordance with the International Olympic Committee. (Center(NIC), 2017) The Ministry of Youth Affairs & Sports was initially set up as the Department of Sports in 1982 at the time of organization of the IX Asian Games in New Delhi. Its name was changed to the Department of Youth affairs & sports during celebration of the International Youth Year, 1985. It became a Ministry on 27th May 2000. Subsequently, the Ministry has been bifurcated in Department of Youth Affairs and Department of Sports under two separate Secretaries w.e.f. 30th April 2008. The specific subjects being dealt with by these two Departments are contained in the Order of the Govt. of India (Allocation of Business) Rules, 1961. Sports promotion is primarily the responsibility of the various National Sports Federations, which are autonomous. The role of the Government is to create the infrastructure and promote capacity building for broad-basing sports as well as for achieving excellence in various competitive events at the national and international levels. The Department schemes are geared towards achieving these objectives. Various initiatives has been taken up by ministry of youth affairs and sports as mentioned below (Center(NIC), 2017) Grants for Creation of Sports Infrastructure:- Under this Scheme, the Ministry gives grants to State/UT Governments, Local Statutory Bodies and registered voluntary bodies active in the field of Sports for development of play fields, construction of Indoor/Outdoor Stadia facilities, etc. In addition, the Ministry also assists State/UT Governments for construction of District/State Level sports Complexes. Financial assistance is rendered subject to the cost being shared between the Union Government and the sponsoring agencies/State Governments concerned in the ratio 75:25 in respect of Special Category States, and Hilly/Tribal Areas, and 50:50 in case of other areas. Central assistance is limited to the ceilings indicated in the scheme for different facilities. Kendriya Vidyala Sangathan /Navodya Vidyala samiti/State/UT Administration will also be eligible to avail assistance upto Rs 5.00 lakhs for construction of certain facilities in their schools. Likewise Grants to Rural Schools for Sports Equipment and Playground;- Under this Scheme, the Ministry releases grants to Secondary /Senior Secondary Schools located in rural areas on fulfilment of conditions regarding availability of play field of a requisite size, having a regularly appointed physical education teacher etc. up to a maximum of Rs 1.50 lakhs for development of Play field and purchase of consumable /non consumable sports equipment. Only one School per year per Block and not exceeding two schools per Block during a plan period are provided assistance under this scheme. Similarly Grant for Installation of Synthetic

Playing Surfaces, Grants for Promotion of Sports in Universities and Colleges:-The Ministry provides financial assistance to the Universities/Colleges fordevelopment of play grounds/construction of Indoor Stadium facilities in the ratio of 75:25 in the case of Special Category States and in the ratio of 50:50 to all other States subject to a certain ceiling. Financial Assistance is also given for purchase of Sports equipment upto a maximum ceiling of Rs 3.00 lakhs, Financial assistance is also provided to the Association of Indian Universities for holding Coaching/training camps of sports persons, inter university tournaments and participation in foreign tournaments. Ministry also assists National Sports Federations.:-The Ministry gives financial assistance to the recognised National Sports Federations for sending their teams abroad for training and participation in internationals tournaments, for holding international tournaments in India, for conducting National Championship and for procuring sports equipments. Sports Scholarship Scheme is also there Under this Scheme, State level Scholarship at the rate of Rs.450 per month, National Level Scholarship of Rs 600 per month and University /College level scholarship of Rs.750 per month are given to sports persons excelling at State, National and University/college levels. Special Scholarships for women champions at the rate of Rs 1,000/- per month (for senior Women sports persons), scholarship at the rate of Rs 6,000/- to women doing Diploma in sports coaching at SAI centre, and Rs 6,000/- to women doing M.Phil/PhD in Physical education per annum for a maximum of 3 years are also given under this scheme. Scholarships are also offered to doctors and scientists and also to selected institutions to motivate and encourage them to undertake research in different aspects of sports science. (National Sports Development Code of India, 2011) Sport development is a national priority, as it promotes active lifestyle, child and youth development, social inclusiveness, employment opportunities, peace and development, and above all a sense of belongingness and national pride. At the national policy level, sport is at par with public education and public health, and like them sport is a public good and sport development is a public function. Several National Sports Federations were formed for the better functioning of sports activities in country, Even though national sports bodies are autonomous in nature both, the Supreme Court of India and several High Courts have, in various judgments, maintained that although national sports bodies are not State within the meaning of Article 12 of the Constitution of India, they come within the writ jurisdiction of High Courts under Article 226 of the Constitution of India because they perform state-like functions such as the selection of national teams and representing the country in international sports events and forums. According to the Constitution of India, sport is a state subject. (Banergee, 2103) The state governments in India allocate funds for developing sports and sports infrastructure as per their priority list. There is no unique approach in developing sports infrastructure throughout the country. Government of each nation plays an important role in promotion and development of sports countrywide. The government and governmental organizations constitute the public sector of the sports industry, which is responsible in making sports policies, allocating grants for developing infrastructure, nurturing talents, and designing specialized programmes for overall development of sports. Government of India working hard for the development of sports in country but still researches shows lack of facilities, Infrastructure and funds etc (R.P.Sharma., 1956) (Misra, 1980) (Mili, 2016). Research conducted by (Suresh Patil, Vithal D Metri, 2016) shows lack of Sports facilities the purpose of the study was to investigate physical education and sports facilities available in Government and aided high schools of Koppal taluka. The finding of the study indicate that none of the high schools have got full staff members, teaching as well as physical, ground men, and librarian. All high schools are lacking with physical education books, magazines and journals. Very few high schools have got well qualified few staff members for teaching. The physical education teachers are having CP.Ed and BP.Ed and MP.Ed qualifications. In connection with equipment‘s, none of the high schools have got enough playing equipment‘s and they do not have sufficient facilities for play

grounds. Not all the high schools have the enough equipment facilities, staff members and physical education books, physical education programmes and cocurricular activities. This is due to the fact that lack of money and lack of well qualified staff members. To improve the physical education and sports programmes government must provide sufficient funds and should appoint qualified staff.

Sport is a powerful tool that humanity can use to improve the well-being of society. However, various international agencies, governments, sport organizations, and entrepreneurs need to pull together to effectively use sport to positively impact people. The role of physical education and sport should particularly be emphasized in school curriculum (Simiyu, 2007) Sports actively educates young people about the importance of certain key values, such as honesty, fair play, respect for self and others, adherence to the rules and respect for the self and others. It provides a forum to for them to learn how to cope with competitions. Sports are a way to build understanding of the value of common bonds. Traditional sports and games are usually lower cost in terms of facilities and equipments. (UNICEF, 1999). As for social development, we must remember that the game is —a get---together, of liberation, of expression." Through it the child "grows, learns, knows and compares with the others having fun"19. From A historical point of view then, the Importance of activities that have been handed down for so long and who have survived so many social changes, are to be analyzed in depth and to be valued (Marta D'atri, 2013.

Good health leads to better longevity of an individual and also enhances performance levels. In order to have good health one needs physical activity and will have to take up one sport or the other to maintain their health. On these same lines, professional thinking amongst sports associations and introducing quality professional programmes, will enhance athletes performance from the grass root level by the following positive steps:

Professional coaching: Introduction of proper coaching methods and the need for qualified coaches must be a priority. Coaches need to be professional in their approach and must introduce modern techniques to athletes.

Every association needs to employ certified coaches in order to produce quality athletes. Emphasis needs to be given for introduction of modern training methods, physical conditioning, diet and then give them the much needed practical exposure.

The Sports Authority of India (SAI), which has certified training programme for coaches at the National Institute of Sports (NIS, Patiala) needs to introduce modern methods of coaching and grading levels to the coaches.

Many of the B. PEd M. PEd students from various Universities come out with little practical knowledge to take up the job of Physical Education Teachers/Directors in schools and colleges. In order to train the children and athletes, the M. PEd/B. PEd graduates need to have the necessary coaching skills and should possess the required grading for coaching.

Coaches in developed countries like Australia, USA., UK, China and others have specialists in their disciplines and have the required grading for coaching. In our country, we do not emphasise on the same and the children made to suffer with them not being coached scientifically at the grass root level. Each State has a Department of Sports and coaches are employed in different levels from the Taluk, District and State-level for different sports. Even the Associations employ coaches for coaching their state team and to run their academies. Coaches in these centres need to be qualified for the job and should be professional in their approach and should be accountable for the performances of the squad.

Talent spotting

Spotting talents and taking them to the next level is the need of the hour. It's the duty of the coach to notice and tap the talent and to maintain a periodical report on athlete's performances for further review.

Improvements and excellent performances must be rewarded by way of incentives and others who need improvement must be encouraged and told about where they stand and what needs to be done in order to progress further.

Each association need to spot talent in each age category in the boys and girls section from the sub-junior to the senior level and should on the basis of their ranking/performance give them the needed training and exposure.

Infrastructure development

Development of modern infrastructure is also one of the aspects which the association must focus. Educational institutions, Universities, colleges and schools should provide top class infrastructure to the students as they collect sports and Infrastructure development fee. Some part of the same should be pooled back and also grants can be obtained from UGC.

Everything cannot be done by the Government alone. It is important for private organisations to join hand with public sector to promote sports and infrastructure.

Need for Sports Management

The concept of Sports Management must be adopted by all sporting associations across the country and emphasis must be given to accountability to achieve positive results. Every State has to formulate a Sports Policy of its own which caters to the development of sports in the State (development of infrastructure, incentive to sports persons, sponsorship/financial assistance to sports persons, Coaching expertise, conducting of International, National & State meets in all Olympic disciplines, employment opportunities to sports persons in State government etc).

Accountability

All the National Associations and recognised Olympic sports disciplines listed by the National Olympic Committee will be funded by the Government of India. The respective Associations which receive the funds need to be accountable. Athletes, who represent the country need to be compensated financially by each Association for various competitions in which they take part.

Sub Unit – VII

Curriculum development - Concepts and principles of curriculum planning. Subject matter for different levels of education - primary, secondary and higher education

5.7.1 Curriculum development- Concepts

The term curriculum refers to the lessons and academic content taught in a school or in a specific course or program. In dictionaries, *curriculum* is often defined as the courses offered by a school, but it is rarely used in such a general sense in schools. Depending on how broadly educators define or employ the term, curriculum typically refers to the knowledge and skills students are expected to learn, which includes the learning standards or learning objectives they are expected to meet; the units and lessons that teachers teach; the assignments and projects given to students; the books, materials, videos, presentations, and readings used in a course; and the tests, assessments, and other methods used to evaluate student learning. An individual teacher's curriculum, for example, would be the specific learning standards, lessons, assignments, and materials used to organize and teach a particular course.

Curriculum is a standards-based sequence of planned experiences where students practice and achieve proficiency in content and applied learning skills. Curriculum is the central guide for all educators as to what is essential for teaching and learning, so that every student has access to rigorous academic experiences. The structure, organization, and considerations in a curriculum are created in order to enhance student learning and facilitate instruction. Curriculum must include the necessary goals, methods, materials and assessments to effectively support instruction and learning.

Goals

Goals within a curriculum are the standards-based benchmarks or expectations for teaching and learning. Most often, goals are made explicit in the form of a scope and sequence of skills to be addressed. Goals must include the breadth and depth to which a student is expected to learn.

Methods

Methods are the instructional decisions, approaches, procedures, and routines that teachers use to engage all students in meaningful learning. These choices support the facilitation of learning experiences in order to promote a student's ability to understand and apply content and skills. Methods are differentiated to meet student needs and interests, task demands, and learning environment. Methods are adjusted based on ongoing review of student progress towards meeting the goals.

Materials

Materials are the tools selected to implement methods and achieve the goals of the curriculum. Materials are intentionally chosen to support a student's learning. Material choices reflect student interest, cultural diversity, world perspectives, and address all types of diverse learners.

Assessment

Assessment in a curriculum is the ongoing process of gathering information about a student's learning. This includes a variety of ways to document what the student knows, understands, and can do with their knowledge and skills. Information from assessment is used to make decisions about instructional approaches, teaching materials, and academic supports needed to enhance opportunities for the student and to guide future instruction.

This learning can take place in groups or with individual learners. It can take place inside or outside a classroom. It can take place in an institutional setting like a school, college or training

centre, or in a village or a field. It is central to the teaching and learning process (Rogers and Taylor 1998).

5.7.2 Principles of curriculum planning

1. Suitability to the age and mental level of the children

- What is to be given to the children in the form of learning experiences at a particular age and grade level should suit their age and mental development
- The capacity for understanding, how children grow with age. The content of the study in any subject should be formed to suit their mental ability.

2. According to the specific interests of students

- Children will be able to learn better in fields where they have special tastes and inclination of the mind.
- It is also found that at different stages of age groups, children have different interest patterns.
- Interests of children also change according to circumstances and situations.
- Therefore learning experiences should be designed to suit the interests and tastes of the age group of students.

3. The curriculum should be environmentally centered

- The content of the learning experiences for children should be linked with the needs of the environment in which they live.
- For example, children from rural areas can understand and grasp easily the information which is directly concerned with their experiences in their own rural environment.
- The same thing applies to children in a various environments like urban areas, hilly areas, etc.

4. The principle of the comprehensive curriculum

- The curriculum must have the necessary details. List of topics to be covered does not solve the purpose.
- Both teachers and students should know clearly what is expected of them, what is the beginning and what is the end of the topic for the particular class.
- Material, aids, activities, life situations etc. should be listed in the curriculum.

5. Principle of co-relation

- The curriculum should be such that all the subjects are correlated with each other.
- While designing the curriculum, it must be kept in mind that the subject matter of various subjects has some relation to each other so that they help the child eventually.

6. The principle of practical work

- Children are very active by nature.
- They like new things and can learn more by doing or by activity method.
- Therefore curriculum should be designed in such a way that it provides maximum opportunity to the child for practical work with the help of concrete things.

7. Principle of flexibility

- Instead of being rigid curriculum should show the sign of flexibility.
- The organization of the curriculum should be on the basis of individual differences as every child is different from the other.
- Apart from these conditions of society go on changing, therefore, the curriculum must be flexible enough to address the needs as aspirations of the society.

8. Principle of forward-looking

- This principle asks for the inclusion of those topics, content and learning experiences that may prove helpful to the students in leading their future life in a proper way.

10. The principle of consultation with teachers

- Teachers play a key role in the implementation of the school curriculum of any grade or stage.
- It is therefore quite essential to seek the proper involvement of the teachers in the construction and development of the school curriculum.

11. The principle of the joint venture

It is necessarily a joint venture where various experts are involved like educational psychologists, educational technologists, curriculum specialists, evaluation specialists, teachers, subject matter experts etc.

12. The principle of availability of time and other resources

Curriculum is the means to realize the outcomes of the educational objectives of the school. Implementation of the curriculum is equally important as curriculum construction. While developing curriculum experts should also keep its implementation in mind. They should be aware of the conditions of the schools and possible availability of time and resources available.

5.7.3 Subject matter for primary levels of Education

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ON

HEALTH AND PHYSICAL EDUCATION
(Classes I-X)

DEPARTMENT OF EDUCATION IN SOCIAL SCIENCES & HUMANITIES NATIONAL COUNCIL OF EDUCATIONAL RESEARCH AND TRAINING SRI AUROBINDO MARG, NEW DELHI – 110 016

HEALTH AND PHYSICAL EDUCATION

Introduction

It is well acknowledged that health is a multidimensional concept and is shaped by biological, physical, psychological, social, economic, cultural and political factors. Access to basic needs like food, safe water supply, housing, sanitation and health services influences the health status of a population and these are reflected through mortality, morbidity and nutritional indicators. An analysis of the mortality and nutritional indicators from the pre-school, primary, secondary and senior secondary levels show that under - nutrition and communicable diseases are the major health problems faced by majority of the children in this country. Therefore health is a critical input for the overall development of the child since it influences significantly enrolment, retention and completion of school. This subject area adopts a holistic definition of health within which physical education and yoga contribute to the physical, social, emotional and mental aspects of a child's development. The basic understanding is that health of children contributes to their healthy living in the future and also provides the base for performance in the chosen area of work.

The curriculum design for this area addresses the health and physical fitness needs of children at different levels of schooling with special attention to vulnerable social groups and girl children. It is proposed that the mid day meal programme and health check ups must be a part of this subject and health and physical education must be related to the needs of the children and also address the age specific concerns at different stages of development. The idea of a comprehensive school health programme was conceived of in the 1940's that included six major components viz. medical care, hygienic school environment, and school lunch, health, yoga and physical education. But unfortunately the implementation of this comprehensive approach was extremely weak that resulted in its transaction in a fragmented manner that lacked a holistic or comprehensive approach. As a result the subject of health and physical education is being dealt with separately

and the curriculum is being transacted conventionally with little knowledge that all the three areas are integral to achieving holistic health.

Given the interdisciplinary nature of this subject there are cross cutting themes across subjects. Therefore there is a need for cross-curricular planning and also integrating it with socially useful productive work, National Service Scheme, Bharat Scouts and Guides and the like. This subject lends itself for applied learning and innovative approaches can be adopted for transacting the curriculum. Physical education inclusive of yoga, have to be a regular part of the school's timetable and must be seen as an important contribution for the overall development of the child. This would require flexibility in the school calendar and also in the structuring of school timetable in terms of the time and space allotted for integration of this subject area.

The importance of this subject to the overall development needs to be reinforced at the policy level, with administrators, other subject teachers in schools, the public health department, parents and children. There are several ways in which this can be done and would include the recognition of the subject as compulsory in the curriculum, that the required infrastructure and human resources are in place, that there is adequate teacher preparation and also in-service training, that there is interface between the school, health department and the community. Although the subject is compulsory till class X, it is not given its due importance. It has been suggested that it be treated as a core subject and students who wish to opt for it as one of the core subjects in lieu of another subject may be allowed to do so. This subject should be offered as an elective subject at the plus two level.

The curriculum and syllabus for this subject has to adopt a 'need based' approach to a child's development. This is the framework that will guide the inclusion of physical, psycho-social and mental aspects that need to be addressed at different levels of schooling. A basic understanding of the concerns need to be delineated but this subject has an applied dimension that needs strengthening through experiential learning, acquiring skills to recognize and cope with demands, expectations and responsibilities of

daily living, the collective responsibilities for health and community living also need to be emphasized.

During the last two decades several National health programmes like the Reproductive and Child Health, HIV/AIDs; Tuberculosis and Mental Health have been emphasizing on health education and children are viewed as a potential 'target group' for preventive and promotive activities. The concern with this approach is that the focus is on giving information and each of these programmes are independent of one another. This creates demands on the teachers and children to deal with each of these concerns and they are not integrated into the existing curriculum.

This subject offers enormous potential for the adoption of innovative strategies and the experiences of quasi government programmes and several NGOs across the country who have worked with schools on issues relating to health and physical education needs to reviewed, assessed and integrated into curriculum planning, development of syllabi and pedagogy. The evaluation of this subject needs plurality of strategies, which should be a part of continuous and comprehensive evaluation.

Aim:

To provide the required theoretical and practical inputs in order to provide an integrated and holistic understanding and developing positive attitudes, values, skills and behaviour related to health and physical education at the primary, secondary and senior secondary levels.

Specific objectives:

1. To help children know and accept individual and collective responsibility for healthy living at home, school and in the community.
2. To help children know their health status, identify health problems and be informed for taking appropriate remedial measures.
3. To create awareness among children about rules of safety in appropriate hazardous situations to avoid accidents and injuries. To acquaint them with first-aid measures about common sickness and injuries.

4. To help children learn correct postural habits in standing, walking, running, sitting and other basic movements so as to avoid postural defects and physical deformities.
5. To help children improve their neuromuscular coordination through participation in a variety of physical activities in order to physical fitness.
6. To help children strive for excellence in games and sports.
7. To provide skills for dealing with psycho-social issues in the school, home and the community
8. To help children grow as responsible citizens by inculcating in them certain social and moral values through games, sports, N.C.C., Red Cross, Scouts & Guides etc.
9. To inculcate values and skills in children in order to promote self-control, concentration, peace and relaxation to avoid the ill effects of stress, strain and fatigue of routine everyday life.
10. To address the physical, psycho-social needs of differently abled children in an integrated fashion.

Inputs required for transaction of subject area:

- The major components that have to be included in the school health programme include medical care, hygienic school environment, and school lunch, health and physical education. The School Health Programme has to be a coordinated effort between the education and health departments with the latter providing preventive, curative and promotive services at all levels of schooling.
- The components of the school health programme must be an integral part of 'Health and Physical education'. Infact health and nutrition programmes should form the basis for health and nutrition education rather than just focusing on 'creating awareness' in children about what they should eat, especially when a large percentage of children do not have access to adequate food. Therefore the mid day meal programme must become a part of the curriculum of this subject along with regular medical check ups and follow up.
- The education department must coordinate efforts with the health department and where the public health services are weak alternative strategies like involving local NGOs and practitioners must explored.

- For health, yoga and physical education there needs to be minimum of outdoor and indoor facilities coupled with proper ventilation and sanitation in the classroom and school premises at the primary, secondary and senior secondary levels
- Given the interdisciplinary nature of the area there is a need for cross curricular planning and need to be integrated with science. Social science, language and other relevant subjects from the primary to senior secondary levels addressing both the theoretical and applied dimensions.
- Science subjects must integrate the health dimensions for topics that are related to health issues
- There is a need to review the curriculum, syllabus and pedagogy of the teacher's training programme for health, physical education and yoga offered by different colleges, institutions and deemed universities in this area within the conceptual framework offered by the focus group.
- All teacher education courses must include health, yoga and physical education as a compulsory subject.
- Descriptive and impact studies be commissioned to review the status of this subject in school education and document alternative experiences in this area.
- There is a need to try the approach suggested for this area on a pilot basis across different types of schools and only then up scaled.
- For effective implementation of this subject advocacy is required at different levels of the education and health systems.
- The group strongly recommends that the curricular area must guide the scope and determine the appropriateness of the design, materials and pedagogy that are prescribed by health programmes as interventions in the school curriculum. This is critical because several of these programmes are tied to external funding and decisions are made at the central and state levels.

Framework of Syllabus

For effective implementation of the subject of Health and Physical Education, the committee identified several broad themes and these included:

1. We and our environment

2. Human Body; physical fitness and health
3. Food and Nutrition
4. Social Health and relationships with others
5. Safety and Security
6. Consumer Health; vocational and leadership aspects.

Each of these themes has been addressed in a progressive and spiral manner keeping in view the preparedness of the child's level of development. Certain broad principles have guided the process of syllabus formulation and these are:

1. Health education and physical education must not be treated merely as an instructive area since they have strong experiential component to them.
2. Some aspects of the subject will draw from other curricular area like environmental science, science and social science. However this subject will have its own core content and therefore needs to be treated on par with other subjects.
3. The experiences of NGOs, teacher educators and individual teachers who have been involved in curriculum, syllabi and material development and transaction must be considered for replication and upscaling in rural and urban schools.
4. Experiences of 'vertical programmes' like the ICDS, midday meal programme, adolescent health (including HIV/AIDS; drug abuse etc) and mental health have been appropriately considered while forming the syllabus.
5. In view of the conscious efforts of the government to promote excellence in games and sports, the syllabus provides for indoor and outdoor games for school children. It seeks to create a broad based approach for the enhancement of skills and nurturing potentially talented children in games and sports.

Transaction of Syllabus

For effective transaction of this subject, text books, work books and resource books need to be prepared for both children and teachers. For this, there is a need for a creative approach to development of resource materials. The NCERT could consider setting up a resource center for materials development, which can help to create a network of individuals and organizations who

have had experience in working with this subject. This network can pool and share materials developed by individual organizations that can be accessed by those working with schools.

Syllabus

Evaluation

(a) The proportion of marks in theory and practical may be assigned differently for Health and Physical Education as a compulsory subject (at Xth level) and that as an optional/elective subject at the plus two level.

(b) Evolve and use the system of Comprehensive and Continuous Evaluation given the applied nature of the subject.

Preparedness required for transacting the syllabus

For the first time this subject is being considered in a holistic manner and hence there are two major areas that need to be addressed for preparedness.

1. Textbook, resource book and other relevant materials for both teachers and students.
2. Human resource development for both pre service and in service teacher training programmes. For inservice teachers there is a need for both physical education and general teachers to be oriented for the transaction of this subject area. Similarly for preservice teachers, health and physical education must be made compulsory. Institutions at the district, state and national levels can draw on available expertise inorder to facilitate capacity and skill building for this area.
3. Need to review and reorient the teacher educator syllabus for 'Health and Physical Education'.
4. The teacher education programmes in Physical Education institutions need consider the inputs suggested in the syllabus.

Annexures

1. Materials used for developing the syllabus
2. For Health Education –case studies of three organizations that have developed syllabi and transacted it in schools- Karnataka, Madhya Pradesh and Maharashtra

SYLLABUS ON HEALTH AND PHYSICAL EDUCATION

Class-l

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
1. HUMAN BODY				
Body Awareness	Who am I?	Description about self and surrounding	Mirror, Live examples of child's own body	Observing mirror image and self portrait
	What are my body parts?	*Identification of* body parts (Head neck, chest, abdomen, eyes, nose, ears, legs, mouth)	Charts, Models, Drawings, Pictures	Observation of body parts Drawings, pictures of human body, Body mapping
	How does my body move?	Different types of fundamental movements	Live examples & Study materials	Observation, Demonstration, Imitation and practice of natural movements (sitting, standing, walking, running etc.)
	How do we sit/ stand/ walk/ sleep?	Correct postures	Posters, Charts, (Materials for) Demonstration	Demonstration, standing, sitting, walking, sleeping
	How do we take care of our body?	Joy and pride of keeping the body clean	Pictures, Charts Study materials	Observation, Demonstration and Practices of washing hands.
2. MOVEMENT AWARENESS				
Growth & Development	What different body parts are involved in different movements?	Body parts and various movements	Models, Observation of own body and that of peer group	Observation, imitation and participation
	How body parts and sports equipments are related?	Relationship between different body parts and sports equipment	Equipment like ball, bat, racket, shuttle cocks etc.	Touching, feeling and identifying shapes, utility and purpose of the sports equipment

	What do we like to play to have fun?	Exercise, play and movements for fun	Available local equipment/resources, e.g.: balls, rope etc.	Minor games, simple relays, local games with or without equipment
3. FOOD AND NUTRITION				
Need of food	Why do we eat food?	Food as a source of energy for work	Food at home/Tiffin	Play-way activities Using picture stories

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
		and play	Mid-Day Meals Study materials	
Foods that we eat	What are the food items that we eat daily?	Identification of food items and locally available foods	Charts & pictures of available food items Mid day meals Various kinds of food items	Observing food items at home Discussion with friends or peer-group Identifying while eating mid day meals/ home-made food items
Eating habits	Why should we wash hands before and after eating?	Hygiene and cleanliness	Soap and water, plates, pans, serving utensils	Demonstration and practices
	Why we must not waste food?	Wastage of food Eating as per need Importance of not wasting food	Food at home/Tiffin Mid-day meals	Discussion and demonstration Sharing of experiences
	Why must we brush teeth and rinse mouth?	Cleanliness of the body	Neem-twigs and other locally available safe cleansing equipment and materials, Toothpaste, Tooth brushes	Demonstration of correct ways of brushing teeth and rinsing mouth
Sharing	Why it is a pleasant experience when we share food	Culture of sharing Appreciating some one else's food Enjoying different tastes	Food at home/Tiffin Special foods on festival days	Demonstration Teachers' participation in eating with children Sharing of experiences
4. SAFETY AND SECURITY				
Safety rules	What hinders safe play?	Common hindrances to safe play	Series of pictures and posters/stories	Identifying play areas in the surroundings (community/ school) for

	How can we avoid mishaps and injuries?	Common mishaps at school, play-ground, road and home, sun heat Measure to prevent such accidents	Series of pictures and posters/stories	safe play Walk in community places, playing in sports grounds Assessing the hazards and keeping the body safe
5. WE AND OUR ENVIRONMENT				

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
Need of water in the body	Why should I drink water?	Importance or water in the body	Charts	Activities facilitating explanation and understanding
Use of Toilets	Where do I go for toileting? How do I keep the toilet and myself clean?	Proper use of toilet Cleanliness after toileting	Posters, Visual Aids Toilets (open and closed)	Sharing of experiences, Discussion and demonstration
Cleaning up after meals	Why do we clean up after taking food? How do I keep surrounding clean before and after eating meals?	Cleanliness (self and environment) Healthy habits	Mid-day Meals, Tiffin, Taking meals at home	Sharing of experiences, Discussion and demonstration

Class-lI

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
1. HUMAN BODY				
Body Awareness	What are our sensory organs?	Awareness about sensory organs : eyes, nose, ears, skin, tongue	Live examples of own body, charts	Demonstration of function of each sensory organ
	How can I maintain cleanliness?	Cleanliness of skin, mouth, nose, teeth, year and eyes	Water, soaps, tooth, brush, paste and other locally available safe cleansing equipment and materials	Action songs Demonstration Observation Sharing of experiences
2. MOVEMENT AWARENESS				
Body Movements	What are the fundamental movements ? - How high can I reach? - How far can I go?	Movements	Open space, cones, markers, ropes, hanging rods, swings, old tyres, hoops	Walking in straight line, circles, zigzag, running variations Hop, Jump Leaping, Galloping, Skipping
	What are the other forms of movements?	Movements	Card-boxes/ boxes/cubes , vands, Indian clubs, lime powder	Balancing, swinging, stretching, pushing, pulling, twisting, bending, sitting postures, lifting, carrying, falling Standing on one leg
	How do I clap? How can I clap to count? How to set rhythm with music? Can I jump to the count?	Rhythm	Whistle, music, clapper, rope, ball, ribbons, benches etc.	Demonstration Clapping + Clapping on count Bounce the ball on the music Children act as ball and bounce on music

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
	Can we fly like a bird? Can we walk like animal? Can we move like a fan? Can we sway like a tree?	Imagination, imitation & Mimic	Examples of various birds, animals, objects etc.	Swinging of arms, body rotation Clock-wise and counter clock- wise movements Sway like a tree Motion/action songs related to movements
3.FOOD AND NUTRITION				
Colours of Food	What are different colours of food items?	Identifying the colour of foods	Various kinds of food items in Tiffin, Mid-Day Meals, Meals at home	Identifying colours while eating together mid-day meals or tiffin
Tastes of Food	Which are different tastes?	Identifying different tastes – sweet, sour, salty etc.	Various kinds of food items in Tiffin, Mid-Day Meals, Meals at home	Identifying tastes while eating together mid-day meals or tiffin
Sources of food	Where does the food come from? Who produces food? Where? Where do we buy food from? Where the food is prepared at home?	Sources of food Farmer (farm, field etc.) Ration-shop, Other shops, Canteen etc. Kitchen	Mid-day meals Materials Pictures/ Illustrations	Question-answer Discussion regarding awareness about shops providing food items Mock-plays (Action as shopkeeper and consumers, Cooking food etc.)
Different foods in different seasons	Which food we eat everyday?	Seasonal food items, vegetables, fruits etc.	Mid-day meals, tiffins, fruits which are locally available	Question-answer Songs
4. SAFETY AND SECURITY				

Getting help during emergency	Whom/Where should I go for help in emergency at home/ school during sickness or injuries in school bus?	Reporting to the teacher in the event of injury and/ or sickness in school (class-room/ playground) Reporting to the elders in the event of injury and/ or sickness	Blackboard Charts	Demonstration and Discussions Demarcation of sports grounds/playfields, cleaning and keeping it free from hazards, i.e.: Removing Glass, paper, plastic etc.
5. WE AND OUR ENVIRONMENT				
Sources of safe	What are the sources of safe	Sources and quality of the water we	Source of drinking water in	Visiting sources of drinking water and Listing them for

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
drinking water	drinking water?	drink	the school, home and public places.	Discussion in the class
Use of Toilets	Where do we go for toileting? How do we keep the toilet and myself clean?	Proper use of toilet Cleanliness after toileting	Posters, Visual Aids Toilets (open and closed)	Sharing of experiences, discussion and demonstration
Cleaning up after meals	Why do we clean up after taking food? How do we keep surrounding clean before and after eating meals?	Cleanliness (self and environment) Healthy habits	Mid-day Meals, Tiffin, Taking meals at home and picnic.	Sharing of experiences, Discussion and demonstration

Class-lII

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
1. HUMAN BODY				
Growth and Development Breathing	How do we breathe?	Basic understanding of breathing pattern and body sounds	Own body, charts, models	Demonstration and Imitation (Actions of stomach and chest Normal and deep breathing Huffing, puffing, sneezing etc.)
Seeing	How do we see?	Basic Understanding of vision	Pictures / Charts / Models of Eyes and mechanism of seeing	Demonstration and Imitation (closing and opening of eyes) Seeing far/near
Hearing	How do we hear?	Basic understanding of hearing	Pictures / Charts / Models of Ears and mechanism of hearing	Demonstration and Imitation (Keep your hands on the ears Listen to teacher / each other Listen to various type of sounds Compare the types of sounds (automobiles, songs, TV programmes, music, drum, water etc.) Avoid listening to high volume of music – disadvantages)
Healthy Habits: Hygiene	What should we do to maintain personal hygiene?	Maintaining cleanliness of our body (hair, eyes, nose, teeth, ears, nails, skin) Proper toilet habits Importance of proper clothing and footwear Proper play and rest	Charts, posters, models	Demonstration and discussion Action songs

2. MOVEMENT EDUCATION				
Neuromuscular Coordination	How do we combine various physical movements?	Neuromuscular Coordination Coupling of Movements ; e.g. Can we combine:	Open space Lime powder for marking of the ground	Performance of neuromuscular co-ordination, activities like jogging, running, hopping, leaping, rolling etc.

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
		walk and run sit and stand stop and walk hop and walk bend and roll walk and run/leap walk and jog Walk, jog and run forward and backward running		
Strength and Judgment	What is throwing & catching?	Developing strength Judgment and decision-making	Open space, balls of various sizes, Lime powder for marking the ground	Throwing and catching in pairs and in groups (simple and manipulative)
	How do we throw and catch any object? How far & high can I throw the object?	Throwing/Catching the ball Developing strength, judgment and decision-making	Open space, balls of various sizes, Lime powder for marking the ground	Throwing to various distances and catching from various distances Throwing the ball farthest and highest
Coordinative Abilities	How do I run with my partner by holding?	Eye-hand, eye-leg and neuromuscular coordination and motor fitness	Open space Lime powder for marking of the ground	Running in pair while holding hands Playing chain Three-legged race
	How can I toss?	Tossing and decision-making	Classroom and playground	Tossing the coin/ ball/ shuttle cock/tennikoit ring/frisbee Taking decision about choosing head or tail and deciding about the turn on any game

				Fundamentals of tossing of various sports object
Combative Skills	Can we move (pull, push) the objects around us?	Combative Actions	Wall, sports equipment , partners	Hand pull/push Line pull/push Back to back pull/push Wall-push
3. WE AND ENVIRONMENT				

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
Cleanliness of Surroundings	How can we keep our surroundings clean & beautiful?	Maintaining cleanliness of class- rooms, playground, toilets and bathrooms, home, room, utensils Proper management of garbage	Class-room, playground, toilet, bathroom, home, room, sitting table, chair, school bag, lunch box, other utensils, chalks, paints, posters etc.	Demonstration for using various equipment like broom and dust pan; disposal of waste Discussion
4. FOOD AND NUTRITION				
Likes & Dislikes about food	What are food items that we like most? What are the food items that we don't like and why?	Habit of appreciation of food Removing unfounded dislikes	Mid-day meals, Tiffin, Meals at home, fruits which are easily and locally available	Question-answer Songs Experience sharing
Wholesome Diet	Why should we take wholesome diet?	Constituents of food (energy, body building, protection) Implications of junk food Frequency of taking food	Wholesome food items Charts Posters Mid-day meals	Demonstration of food material Observing implementing mid- day meals programme Using picture story
Variety of food	Why do we include various food items in our meals?	Importance of including a variety of food items in diet and frequent eating sumptuous diet.	Tiffin, Food at home, Mid-day meals	Discussion and Demonstration (Exercises depicting food functions Bring variety of foods on particular days Special foods during festivals) Discussion on chart of balance diet
5. SAFETY AND SECURITY				

Keeping safe	What can we do to keep ourselves safe and how?	Safety measures Fire, electricity, fire crackers, water, animals and insect bites, sharp objects, insecticides	First-aid materials (Creation of standard First- Aid Kit) Available safety gadgets, Materials	Demonstratio n Role-play Group Discussion Sharing experiences
6. SOCIAL HEALTH				

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
Family	Who looks after me at home? How my family is important to me?	Concept of family – Family as a support system – Co-operation – Respect for each other and elders – Respect for other gender	Open space Story Pictures	Group activities and games Story-play and discussion based on story Sharing of experiences
Social relations	What do our elders feel?	Communication with grand parents, parents, neighbours and teachers	Picture stories on , social interactions, home, school	Sharing of experiences on talking to grandparents/parents/ neighbours/teachers about their childhood
7. CONSUMER HEALTH AND SPORTS SERVICES				
People/ Personnel as caretakers	Who will help me when I am sick or injured, tired or uncomfortable?	Role of family/ teachers, health/sports professional	Pictures Study materials	Discussion Role-Play Story AV-aids
Use of Toilets	Where do I go for toileting? How do I keep the toilet and myself clean?	Proper use of toilet Cleanliness after toileting	Posters, Visual Aids Toilets (open and closed)	Sharing of experiences, discussion and demonstration
Cleaning up after meals	Why do we clean up after taking food? How do I keep surrounding clean before and after eating meals?	Cleanliness (self and surroundings) Healthy habits	Mid-day Meals, Tiffin, Taking meals at home	Sharing of experiences, discussion and demonstration

Class-lV

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
1. HUMAN BODY				
Heredity and Environment	In the family. whom do I resemble physically Whom do I resemble in my behaviour?	Role of Heredity & Environment in shaping self. [height, weight, habits, voice temperament etc.]	Photographs of twins, look-alike people in the family Materials on child's own experience in family, school and community.	Stories Sharing of experiences of children's life
2. MOVEMENT EDUCATION				
Physical Exercises	Why do we exercise?	Objectives of exercises: Good for health and fitness Base for sports performances Importance of warm- up, rest and sleep	Open space Charts Whistles Lime powder for marking	Exercise on two, four and eight counts Calisthenics Jogging, Running Simple stretching General warm-up exercises - Toe-to-head - Head-to-toe
Speed and Power	How fast can we run? How high can we jump? How far can we throw?	Speed Power	Stop watches, open space, measuring tape	Sprinting, Running in Variation Vertical jump Standing broad jump Running long jump
Coupling Motor Ability	Can we crouch and roll our body and also maintain the balance?	Developing flexibility and balance	Mats or Soft surface with carpet/dari on it	Forward roll, Backward roll, Forward roll and Leg split, Backward roll and leg split, Cartwheel

Coordination	Can I do rolling with my partner? Can I roll on the line? Can I roll on the bench/beam?	Coordinating motor ability with partners and objects	Mats or Soft surface with carpet/dari on it Open space/Indoor	Rolling with partners (double/triple) Free play (informal games & sports)

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
Rhythm and Reflexes	Can I perform on command/rhythm?	Reaction time Responding to command Responding to rhythm	Whistle Clapper	Positions of 'On your marks' and 'Go' Positions of Attention, Stand- at-ease, Right-turn, Left-turn, About-turn Marching on-the-spot (Kadamtal)
3. WE AND ENVIRONMENT				
Lighting and Ventilation	Why do we need light and air?	Importance of adequate lighting and ventilation for health	Charts, Experiments, Field visits, Observations	Sharing of experiences on: Requirement of air and a well lit environment
Water & Water Supply	How is water supplied to the people?	Difference between clean and dirty water Sources of water supply Agencies responsible for water supply	Pictures Study Materials	Discussion and Demonstration on: (i) Various ways of water supply (ii) Differences in rural and urban areas
Water purification	How can we differentiate between pure and impure water? How can we purify water at home?	Water purification methods	Study materials Things/articles needed for water purification	Discussion & Demonstration (water purifying experiment in the class)
4. FOOD AND NUTRITION				
Wholesome food and Junk food	What are the harmful effects of junk food?	Wholesome food and junk food: Differences	Pictures of wholesome food and junk food / Charts, Posters, Magazines	Demonstration, observation of practices of healthy eating habits

Food hygiene and Storage	Which are the food items that get spoilt soon and which don't?	Basics of food storage and hygiene	Pictures, Food items in Mid-day meals Programme	Demonstration, Discussion
Food path in the human body	Where does the food go when we eat ?	Functional digestive tract	Charts and pictures, Models	Demonstration, Discussion

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
Malnutrition	What is malnutrition and its causes? What are the effects of malnutrition ?	Malnutrition and causes of malnutrition Deficiency problems, obesity.	Pictures Study materials	Discussion
5. SAFETY AND SECURITY				
Road Safety	How do we cross the road? How traffic is controlled on the road?	Walk-ways, Zebra- crossings Traffic signs	Charts, Drawings, Models, Road- safety literature	Mock-play (Policeman, driver, pedestrian, cyclist etc.) Action-songs Demonstration of traffic signals - Charts
6. SOCIAL HEALTH				
Social Relations	How many friends do you have in neighbourhood and in school?	Social relations: Home, Neighbourhood, Society	Picture stories Other study materials	Discussion/Sharing of experiences from Home, Neighbourhood, Society
Psychological Security	What things are you afraid of in your daily life? How do you cope with your fears?	Types of fear, Introduction to Coping skills	Materials on Child's daily life experiences Workbook	Interactive activities focused on experiential learning
Relationships through play	How do we play together?	Interpersonal relations and belongings, Recreational skills	Markers, cones etc.	Circle games, Tag games, Relay drills and minor games
7. CONSUMER HEALTH AND SPORTS SERVICES				

Human resources and services of play and health management	Who can help me to learn games and sports? Who can help me in case of injury? Whom can I approach in emergency?	Teacher, Coach, Captain, Trainer, Teacher Emergency on road, in park, play ground, school, home Ambulance, First-aid, 101, 100, Dispensary, Hospital, Primary Health Centre, Child help line.	Pictures and Charts, Available resource material	Discussion, Visit to stadium, PHC/Hospital. Fire Station Demonstration of First-Aid Kit/ Illustration

Class-V

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
1. HUMAN BODY				
Structure & Functions of the body	How does my body function?	Understanding of the body systems i.e. functional anatomy and physiology, skeleton, muscular, respiratory, circulatory, digestive, excretory	Charts Models Study materials Own body	Discussion, Demonstration Breathing Exercises
Postures	Why do we have correct postures	Correct Postures: Sitting, walking, running, lying, lifting objects	Chart, Pictures Study materials	Demonstration and practice postures while sitting, walking, running, lying Posture while lifting objects Posture while working on computers
Worms	How are we affected by worms? How can you treat worms? How can they be prevented. What are the symptoms of worm infection/infestation ?	Description of worms, reasons for being affected by worms, sources of worms, routes of entry of worms in the body Preventing and Treating worm infection Proper use of toilet & washing hands.	Charts, Model Life specimen School Health Services Study materials	Story Telling School Health Check ups Situational analysis: (Some maths problems : e.g. If Mahesh eats 250 grams rice and 50 grams dal and the worms in his intestines eat half the food how much of his food do they eat in a week? There are 50 female worms in Rupa's intestine. One female worm lays 2,00,000 eggs in a day. How many eggs would the 50 female worms lay in all?

				More problems could be made on cost of treatment)
2. SPORTS SKILLS ABILITIES				
Indigenous and Self-defense activities	What are the popular games in our region, which we can play ? What are the games of Indian origin? How can I be ready to save myself from attack of an	Local games Games of Indian origin Self-defense, Martial Art, Games of different parts of India, Lathi, Kalapati,	Games without apparatus, Lime powder for marking of ground, whistle Judo mats	Demonstration and Discussion Playing locally popular games Kho-Kho, Kabaddi Martial Art – Judo/Karate/

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
	opponent?	Wrestling, Salambam		Taekwondo
Coordination, Flexibility, Balance and Timings	What are the ways to have my body in control and balance?	Self-testing activities and use of large muscles	Wooden Boxes of different heights Mats (if available)	Demonstration & Practice of skills Dive-and-Roll, Cart-wheel (in movement), Hand-stand, Turns and jumps, Pyramids
Track & Field Events	How can I perform like an athele?	Basic Skills –Running, Jumping and Throwing	Stop-watch, lime-powder for marking, relay batons, bamboo sticks/Rope for high jump, long-jump pit, cricket ball, measuring tape	Demonstration & Practice of skills Track Events (dashes-standing and crouch start, relay, simple hurdles) Jumps (running long jump, modified high-jump, hop-step- jump) Throws (Cricket ball throw)
3. WE AND ENVIRONMENT				
Personal Hygiene	How can I observe personal hygiene? Why do we need toilets?	Cleanliness Different types of toilets	Study materials Field visits and locally available resources	Demonstration and discussion on all aspects of personal hygiene and cleanliness, how to use toilets at home and at the school? Experience sharing on habits of personal hygiene
Plastic Waste	How plastic is important in life? How do plastics harm the environment? How do we safely use plastics?	Plastic substances, Use and Abuse of plastics Safe disposal and Recycling of Plastics	Plastic articles	Items-show Discussion with children on what happens to the environment by haphazard disposal of plastics
Water purification at	What are the methods for water	Processes of Water purification at	Locally available	Arrange field visits to the local water purification and

community level	purification at the community level? Which are the Agencies involved in Water purification.	community level	resources Indigenous practices	distribution plant
4. FOOD AND NUTRITION				
Food culture	What are our traditional food habits?	Traditional food habits and health.	Locally available resources in various cultures	Question-answer Experience sharing Demonstration – different ways of eating

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
Nutritive values of food	What are the nutritive values of different foods?	Food values	Food items, recipes	Preparing food and discussing about food values while sharing meals.
Daily Requirements	Why different age groups have different daily requirements?	Different needs of different age and work-groups	Pictures Charts	Experience-sharing Workbook
Food borne Diseases	What are the diseases caused by food contamination? How to prevent it?	Causes of food contamination Prevention of food contamination	Newspaper items	Reading, Discussion
Eating places	What precautions should be taken while eating outside?	Do's and don'ts of eating outside	Charts/Pictures Outside/road - side eateries, dhabas	Visits the places to observe and note the findings
5. SAFETY AND SECURITY				
Survival Skills	What should I do in the event of natural calamities?	Prevention and principles of safety (Hazards of water, fire and natural disasters)	Study Material Charts, Posters	Demonstration, Interaction Opportunities to develop confidence in water, fire and natural calamities Demo for correct use of appropriate use of safety equipments like fire extinguishers etc.
6. SOCIAL HEALTH				
Self-esteem	What do you think you are good at?	Uniqueness & Self- esteem	Child's own experiences	Discussion, different creative activities
	Does your elder brother/ sister/ classmates/friends bully you or do you bully others?	Self-image Managing relations	Child's own experiences Input from siblings, class- mates	Interactive group-discussion

Peer-group Relation	Can we play in group, enjoy and do not fight? What happens if I win? What happens if I lose?	Harmonious relations Respecting self and others Understanding winning & losing	Lead-up games Minor games	Group Dances LEADUP GAMES : - Rolling and Kicking - 10 passes basket ball - Bucket Cricket - Circle Kho - Tunnel Ball - Teniquet

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
				- Target kicking - Leg Cricket MINOR GAMES : ON THE BANK IN THE POND
7. CONSUMER HEALTH AND SPORTS SERVICES				
Physical resources and services of play, fitness and health management	Where can I go for health fitness? Where can I go for medical advice?	Stadium, Club, Akhara, Vyayamshala, Sports Centre, School, Community Centre etc. Dispensary, Hospital, Primary Health Care Centre	List of Health Fitness Centres	Information session Group work Resource material preferable a list of addresses and means to contact (postal addresses, telephone number etc.), means to reach the venue (modes of transport available, routes, fare etc.)

5.7.4 Subject matter for secondary levels of Education

Class-VI

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
1. HUMAN BODY				
Growth and Development	What is growth and development ?	Meaning of growth and development.	Height-measuring equipment/ Marked wall Weighing machine	Measuring height and weight of the students
	What is the difference between growth and development?	Difference between Quantitative & Qualitative changes	Charts Posters School Health service	Discussion variations in height and weight
	How do boys and girls are similar & different?	Physical characteristics - Concepts of Body image	Models, Charts Norms of height/weight Records of Anthropometric movement	Group-discussion and experience-sharing
	How my body functions?	Functional organs- Systems in relation to Health fitness	Figures Charts Photographs	Workbook/Group work
Bones	What are the different kinds of bones in our body? How are they joined to each other? How are they formed? How can we make our bones healthy?	Bones and their function Nutrients for Bone formation	Pictures of the skeletal system (back and front)	- Feeling and counting the bones of the body as one sees a picture of it - Physical activities like running, jumping, skipping

Commo n Injuries of Bones	What do I do for a broken bone?	Keeping bones healthy First aid for fractures	A cardboard pipe, a piece of rope or thread to show vertebra.	Show chart, discussion on experience.

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
Disabilities and Difficulties	How do I perceive differently abled persons?	Different kinds of disabilities Learning to understand and to help persons with physical disability	Study materials Pictures and other illustrations of differently abled people performing different roles	Walking up the stairs, visiting the toilet, writing on the blackboard, eating your food after tying your knees with a rope, wrapping your fingers with a cloth Discuss on the difficulties faced
Postural Defects	What are the different postural defects?	Remedies		Check-list Demo and feedback Corrective Exercise
Protection from the Diseases	Why do we fall sick? How does the body protect us from disease? How can we help improve our immunity? What is immunization?	Immunity and immunization: brief description of the immune system; causes of illness, role of immunization Experience of illness disease, pain, discomfort; Common health problems: (Check Class IX science syllabus)		Make separate groups of girls and boys and make a chart of the types of exercise each person does on each day of the week. Discuss these. Also discuss what are the things one does to relax. Is there a difference between the boys and girls?
2. PHYSICAL FITNESS				
Physical Fitness	Are we healthy? Am I physically fit? How can we become more fit?	Concept of Health Concept of physical fitness Strength, Endurance and Flexibility	Charts Information material Work-book Motivational techniques Pictures of athletes and sportspersons Sports	Classroom session on physical fitness : Discussion, Explanation

			bulletins Sports records - making and breaking	
Introduction to Components of Physical Fitness	How fast can we run? How strong are we?	Assessing speed Assessing strength	Open space Lime powder Medicine balls Minimum strength Test 30 M & 40 M Dash	Demonstration & Performance Practical exercise like running, short sprint, broad jump, 600 mtr. run.

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
	How flexible I am? Can I coordinate my movements?	Test for flexibility Coordinative abilities	Sprints – dash running, Strength - squats, medicine ball exercises etc. Sit and reach-test Test for flexibility, Minor Games Aerobics, folk-dance (solo, pair, group) Folk-dance resources (music/equipment)	
Leaders and followers	Can we be ready for instruction? Are we able to impart or follow instructions?	Formations Line, file, circle, oval, triangle, diamond, rectangle, square, pyramid Working/ response to command Working in formation and groups	Markers Microphone/ PA System Drum	Count-in-two/three Making students to form the desired formation and perform some kind of group- activity in a particular formation
Player and Sports personship	How can we become sportspersons?	Learning motor skill Observing ethical values Participation in competitive sports Regards for rules, regulations and judgments	Material on fundamental skills : (Reinforcement of previously acquired skills and fitness) Track and field Gymnastics*	Demonstration, Practice (Individual/ Group & Team)

		Team-spirit	* forward roll, backward roll, sideward roll, balance on one leg, cat and scissor jump, 180 turn on leg. Team Games & Sports (any two) Kabaddi, Kho Kho, Volleyball, Badminton, Judo, Basketball, Cricket	
Meaning and	How yoga is	Benefits of Yoga	Daries, Charts,	Surya namaskar, Tadasan,

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
Important of Yoga	suitable for me and why should do asanas and pranayam?	asanas	video clips	Vrikshasan, Bhujangasan, Shalabhasana, Pranayam
3. WE AND OUR ENVIRONMENT				
Microbes – useful and harmful;	What are microbes? What are the different types of micro-organisms?	Microbes – useful and harmful; how they cause disease and how they are useful?	Observation	Observing the conversion of milk to curds, fermentation for idalis and bread Demonstrate the useful effect of microbes by curdling milk in the class room; raising of dough. Talk about soil microorganisms and how they help maintain soil fertility
Water borne diseases	How water-borne microbes cause disease?	Water and Food- borne diseases	Charts, Models, Slides, Field visits	Role play – A group of children could represent disease causing organisms, some of them can represent children suffering from these diseases; in-built message of prevention and protection from these water and food borne diseases Call a local doctor of a nearby PHC/ Hospital/Clinic and let the children interact with him/her.
Diseases transmitted through fecal matter	How are these diseases transmitted?	Transmission of fecal during rainy season food borne diseases	Charts, Models, Slides, Microscopes	Demonstration, Lectures
4. FOOD AND NUTRITION				

Purchasing, consuming and preserving nutritious food	What is the availability of food? What are the food we preserve and why?	Diversity of Indian foods, seasonal and locally available food Purchasing food and economics of foods, consuming patterns based on economic levels, food practices and preservation of food values, cooking methods	Locally available foods, Posters, Charts Local markets shops Workbook	Explanation Method Visits to presentation and processing units Sharing of Experiences Preparing the locally food items that can be preserved.

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
5. SAFETY AND SECURITY				
Safety outside the school	How can we prevent & manage minor injuries?	Accidents-Safety outside school (during excursions) first aid – wounds dressing etc;	Bandage, Cotton, Tapes, Medicine Chart and Posters	Demonstration Visit to a local clinic/dispensary and site of disaster
6. SOCIAL HEALTH				
Gender Sensitivity	What are the socially constructed role for men & woman in the family?	Gender and gender difference : feticide - Sharing of work responsibility stereotype work roles proper gender roles.	Newspaper Cuttings, Charts	Discussions Experience Sharing -Care study -Drama
7. CONSUMER HEALTH AND SPORTS SERVICES				
Patient's Right	Do patient have any right?	Concept of patients' right	Media Coverage Newspapers	Discussions/Sharing of Personal Experience - Listing of different competition

Sports Awareness Safe water and role of Local Bodies	What is Olympics & its history. What are the services Government provides regarding safe water? Are the services Adequate?	Olympics flag, torch, emblem, motto, ideals Agencies providing safe water.	-Pictures -Reading Material Agencies Study materials	Sports Quiz regarding general awareness according to the level of students Olympic flame making project Sports-badges collection Sports-stamp collection Visits to local bodies Group Work Project work

Class-VII

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities / Processes
1. HUMAN BODY				
Process of Growing-up Menstruation	What are the changes that occur at puberty? Why do these changes occur? What is menstruation? How can you keep clean during menstruation?	Difference between boys and girls during growing-up Puberty Menstruation Common menstrual problems Emotional changes Sexual Health, Hygiene and Genital Hygiene Need for cleanliness during menstruation	Study material, Drawings and Figures Models of reproductive system Films Work book	Interaction Discussion Life skills focused activities - Question Box
Myths and Misconceptions regarding growing- up	Is there any change in the ways your parents & society interact with you as you are growing? Should girls change their behaviour during menstruation period?	Body consciousness Attraction towards opposite sex Socio-cultural norms Parent adolescent relationship Common myths and misconception regarding growing up and menstruation	Drawings and Figures Reading Material	Interactive session Discussion Life skills focused activities

Sexual Abuse	What is sexual abuse? What can we do when somebody is sexually abused?	Touch including unwanted touch sexual abuse Prevention of sexual abuse Life skills	Study material, Stories, poster, newspaper clippings.	Discussion Story Telling Role Play Life skills focused activities

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities / Processes
Concept of Body Image	Whom do you consider beautiful? Is physical beauty the only thing that makes a person beautiful and likeable?	Concept of beauty, body image Misconception about body image	Advertisements about Cosmetics, Clothes etc. Stories and Life-experiences	Information Sharing experiences of great personalities Examples of famous players, actors/actresses etc.
2. SPORTS SKILLS				
Motor skills	How many more activities we can play?	Opportunities to play games and sports	Play ground Gymnastic beams & benches Mattresses	Fundamentals of track & fields events - 100 m. run, 600 m. run/walk Basic gymnastic Balance on one leg, jumps, turn 360 degree Games (As per available facilities) : football, hockey, basketball, cricket, kho-kho, kabaddi , badminton, volleyball, swimming, judo, wrestling etc.
Rhythm	How do we move smartly?	Developing ability of naturally responding to : command, limited space, group-work, formations	Microphone/ PA System Marker s Drum	Marching on command Marching formations Exercising with Apparatus : Lezium, Dumbbels, Tipri, Wands, Hoops, Ropes, Balls, Ribbons Aerobics and other group- activities
Yoga	Why do we do Asanas?	For healthful living	Yoga Charts	Orientation to Yoga

	What is Mudra?	Postures	Posters of Yogic practices	Gomukhasana, Yoga-Mudra, Viparitkarani, Sarvangasana, Matsyasana, Halasasana, Ujjayi (without Kumbhaka), Shavasana
3. WE AND ENVIRONMENT				
Vector borne disease	What are vectors? What are the life cycles of different vectors	Vector's Life Cycle Life cycles for prevention & treatment for illness.	Charts, Models, experiments Real life situations Observations	Watch and write about mosquito behaviour Watch different mosquitoes under a microscope

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities / Processes
	– like mosquito etc? How do vectors carry diseases? How do we break the life cycles of vector in order to prevent the diseases?		and discussions Slides	Visit a microbiology lab and see slides of Plasmodia etc
Environmental Pollution & Health	What is a good environment? What are the sources of Environmental Pollution & how we can prevent it?	Concept of good environment Different sources of Environmental Pollution & its effects on health. Steps for prevention of pollution.	Charts, Models - Pictures -Reading Material	Listing of different sources of Environment Pollution -Interaction -Discussion
4. FOOD AND NUTRITION				
Preparing Foods	How to prepare food nutritiously?	Preparing new and old recipes	Some recipes	Making some recipes
	What is the relation between food and festival and celebration? Who purchase cook and serve food?	Preparing foods for celebration - festival / special occasion and its food value for health.	Meals prepared by students. Study material.	Listing of festival foods Organizing a small community meal or class- meal (pre/post any festival)
5. SAFETY AND SECURITY				

Common Injuries	How we deal with common injuries?	Simple common injuries Identification & Treatment	First-Aid Box	Practicals & Role play

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities / Processes
6. SOCIAL HEALTH				
Community Health	What is our responsibility towards the health of self and community'?	Social responsibility Our role as a change agent	Work book on health and habits Checklist of responsibilities and self-assessment proforma	Community based projects
Peer and Social Pressures	Did any friend pressurize you to smoke a cigarette or drink alcohol or try a drug? How can you say 'No'?	Peer pressures Ability to say 'No' Health hazards of smoking, alcohol and drugs abuse	Advertisements, wrapping papers, warnings, packets etc. of related items Informative material	Discussion Role Play
Adapting to Situations and Changes	How to cope-up with the stresses of changes during growing–up?	Changes occurring during growing-up	Material Observation of self and others	Discussion followed by guidance
Outstanding personalities in Health and Sports	Who are your role models? How can they influence our society and culture? How did the personalities contribute to these discipline and society?	Role Models in relation to different games and sports.	Role Models Biographies, movies, posters, T.V., radio, magazines, newspapers highlighting local/ panchayat level achievers etc.	Story-telling Life-experiences Discussion about the local heroes, outstanding students in the school or currently popular personality in any field
Positive Use of Leisure Time	When you are free what is that makes you happy?	Creative leisure	- Material - Chart, poster - Film	Play, exercise, reading books, poetry, singing, dancing, play-models

	What make it difficult for you to do things that make you happy? How can you reduce these barriers?			Identifying individual potentials through observation. Guidance to find ways for utilizing time

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities / Processes
7. CONSUMER HEALTH AND SPORTS SERVICES				
Govt. Health Services	What are the Govt. Health Services? How does advertisement affect healthy behaviour?	Structure and function of different levels of health care. Role of advertisement on health	Literature – Information bulletins, circulars, brochures, newsletters etc. -Newspapers, films, radio, Electronic & print media	Meeting with Government health functionaries Visit to local sub-centre/ dispensary -Self Assessment - Creating healthy promoting Advertisement
Sports Scholarships and Awards giving Agencies	Is there any scholarship in sports for winning medals or for participation in sports?	Availability of scholarships at school / zonal / inter-zonal / district / state / national / international level	Information Bulletins, Brochures News Clippings etc.	Preparing list of the scholarships and / or awards available (specifying name, amount, eligibility, duration etc.)

Class-VIII

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
1. HUMAN BODY				
Mental Health	What is the difference between Mental Health and Mental illness?	Concept of mental health and mental illness.	Charts, Posters Materials	Observation of behaviour of people around (home, neighbour, society, school etc.) and in different situations (happiness, sorrow, winning, losing etc.) followed by discussion and counseling
Growth and Development	What are the major causes of defects in eyes and ears?	Role of heredity and environment Defects related to eye and ear	Models, Charts School Health Services	Discussion School Health checkup Referral and follow up
Emotional Development	Why am I in such a bad mood? How can you take control of it? When do I get angry? How can I manage my anger? What is shyness, what are the causes of shyness? What can someone do about shyness? How can you overcome it?	Emotional changes concern for physical appearance, assertion of individual identity, existing social values and norms : moods, anger, shyness, etc. Identification of causes for mood swing during adolescence and strategies to overcome it.	Reading Material Books Charts depicting different moods	Discussion and other co-curricular activities and games and sports.

Target / goal- setting and identifying strategies to achieve it	What are your goals? How can you achieve them or not achieve them? How can you be positive? How can you focus	Goal-setting Identifying own strength and weaknesses Planning strategies to achieve set goals	Reading Material Books	Each student could draw a hexagon and write one goal they have in life in its center. Then on each side of the hexagon write the answer to the following question: Is your goal clear? Is it realistic? Is it achievable? When can

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
	on accomplishments and not on failures?			you achieve it? What will you have to do in order to achieve it? How will you know when you reach it? Setting goals for your physical accomplishments, competing against own/others' sports records and performance Evaluating the opponent team and planning own team's strategy
2. ORIENTATION TO SPORTS SKILLS				
Sports Skills (- For recreation - For Competition)	Can we recreate through physical activities? How many more games we can play?	Recreation through physical activities Learning of Basic Sports Skills Fundamental skills of nay two major games as per the availability of facilities	Reading Material Depending upon the nature of recreational activity	Activities Recreational Games – badminton, table-tennis etc., Party Games Modified Games Football, Hockey, Basketball, Cricket, Kho-Kho, Kabaddi Volleyball, Swimming, Judo, Wrestling etc. TRACK & FIELD GYMNASTICS Match Practice (before / after school)

Agility	How can we test our agility?	Agility for fitness	Measuring tape, stopwatch, whistle, open space, lime-powder for marking	Pushups/modified pushup Bent knee sit-ups Shuttle run
Yoga	What are the asanas and kriyas we can perform?	Flexibility Static contraction of muscles	Charts, Posters, Graph, Photographs	Performance of Halasana, Ardha-Matsyendrasana, Paschimotanasana,

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
		Concentration Balance	of Yogic Practices	Gomukhasana (Baddha hasta), Bhadrasana, Tadasana, Uddiyana Bandha, Agnisara
3. WE AND ENVIRONMENT				
Water and hygiene sanitation	What is the importance of water conservation? How do we prevent water wastage – at the personal level, family level and community level Using water wisely	Water hygiene and sanitation, water management, kitchen garden, using grey water	Field visits, Charts, Slides, Models	Harvesting structure in the school Raise and maintain the kitchen garden Demonstration of water management in home and school
Seed banking	What is seed - banking and how to do it?	Seed banking, learn about indigenous seed varieties and its impact on health.	Seeds, Soil, Water etc.	Collection of seeds of all locally grown crops and making an indigenous seed bank in the school
4. FOOD AND NUTRITION				
Food practices	What are different types of food practices?	Food choices and mixes Shifts in food practices Globalization of food practices Seasonal foods and festivals Fasting, nutritional anemia	Charts & Posters	Discussion and sharing the experiences of peer group
GM (Genetically Modified Food)	What are the GM foods?	GM foods – debate about the usefulness and the harm that these foods can cause	Reading Materials Picture of GM Food	Debate on the GM foods amongst the children

			Samples	
5. SAFETY AND SECURITY				
Safety from Animals and treatment of animal bites	How can we prevent and treat immediate attack on our body from	Knowledge about providing first-aid- incase of snakebite, animal attacks, dog-	Use of first aid materials to tackle the problems	Demonstration Preparing practical file mentioning steps to tackle animal attack

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
First-aid	animals? Where is treatment available? What are the situations which require first-aid?	bites Hospitals, PHCS	Material First-aid box	along with providing first-aid, Role Play Practical classes of first-aid, bandaging. PRICER – Prevention, Rest, Ice, Compressor, Elevation and Rehabilitation
6. SOCIAL HEALTH				
Qualities of socially healthy persons	Am I a socially healthy person?	Listening to others, doing negotiations, making decisions, being assertive, solving problems, being confident, caring for nature, doing activities for relaxation, reacting to strangers, caring of the aged and developing leadership skills	Resource Material, Media Material	Discussion Experience-sharing (peer group) Guidance and Counseling
7. CONSUMER HEALTH AND SPORTS SERVICES				
Health Programmes and Blood Banks	Do health services respond to our needs? How do we make them responsive?	National health programs including NRHM (National Rural Health Mission) Blood banking, blood groups, and blood safety Patients' rights, role of school and Gram-Panchayat, Community	Information bulletins, brochures, newsletters Information bulletins, brochures, newsletters	Group Project on experiences with health services in family and community Organising blood donation camp Campaign

Role of Media and Advertising	What is the influence of the media and advertising on our health and/ sport promotion?	Role of Active media Advertising and Health Advertising and Sports	Resource Material	Project to gather advertisement related to health and sports information

Class-IX

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
1. HUMAN BODY				
Illness and Disease	Why do we fall ill?	Causes of illness	Reference books, Charts Websites dealing with the knowledge, Models	Discussion, Demonstration & Explanation
	How can we manage illness?	Procedure to deal with various kinds of illnesses		
Communicable and non communicable Diseases	Are you aware of communicable and non communicable diseases?	Enlisting and knowledge about communicable diseases. Also information on Reproductive health including RTI'S/STI'S, Risk factors, myths and misconception of HIV/AIDS, Responsible Sexual Behaviour	Reference books, Charts, Websites dealing with the knowledge, Models	Discussion, Demonstration & Explanation
Growth and Development	What are the factors affecting growth & development	Heredity, Environment, Socio-personal factors, Psychological security, Suicides and its prevention, Mental illnesses, Emotional relationships, self concept and self esteem	Reference books, Charts, Websites dealing with the knowledge, Models,	Discussion, & Explanation
2. ORIENTATION TO PHYSICAL EDUCATION & SPORTS EDUCATION				
Physical Education	What is Physical Education?	Need and Importance of Physical Education	Reference books, Study Materials	Demonstration Participation Interactive sessions
Objectives of Physical Education	What are the Objectives of Physical education?	Explaining the objectives of physical education like physical, mental, social and emotional development	Reference books, class lectures	Discussion

Warming-up and Cooling Down	What is Warming-Up? How to get ready and limbering down for and after specific	Role and importance of warming-up Need for limbering down after physical activity	Playground	Playing games after warming-up Measuring of pulse rate

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
	physical activity?			
Physical Fitness	What is Physical Fitness? What are the effects of Physical fitness on our human body?	Concept about Physical fitness Components of Physical Fitness	Reference books. Stopwatch, measuring tape	Conducting physical fitness tests like- Short runs, Distance runs, Sit- ups, Pull-ups, Pushups, Vertical and Standing Broad jumps. Recording the performance of each child and documenting the same
Measurement of Growth	Can we measure the growth of our human body?	Assessment of Growth	Stadiometer, weighing machine, measuring tape Age Appropriate Index	Practical demonstration of measuring the body parts and weight and recording the data in the practical file
Sports Training	What is sports training?	Aim, Characteristics and Principles of sports training	Reference books	Interactive Session practical use of principles of sports training in playfield with the help of various sports
Excellence in Performance	How can we prepared for performance excellencies at higher level?	Factors affecting the training of an athlete Physical, Physiological, Psychological Environmental Factors	Playfield, stopwatches, measuring tape, textbooks/reference books	Demonstration and Participation in games and sports
Fatigue	What is Fatigue?	Concept of fatigue Causes & symptoms of fatigue. Remedial measures to overcome fatigue	Reference books	Practical demonstration of fatigue factors on playfield using various

				physical activity
Load and Adaptation	What is Load and Adaptation? How to judge the Load?	Relationship of load and adaptation Components of load and its importance in training, fitness and health development, Sign and Symptoms of overload	Reference books	Project work, Interactive Session Use of physical activity and various sports along with other training methods on the playfield.

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
				Practical counting of the pulse after physical activity and recording it in the practical record book for further analysis
Relaxation	How can we relax?	Meditation and its advantages. Relaxation through Yoga and various Recreational activities	Playground, Hall or classroom	Selected yogic asanas, meditation and use of various recreational games
Knowledge and proficiency in sports and motor skill acquisition	Are you aware of the evolution of various sports? What motor skills are required to play a sport?	Historical evolution, rules and terminologies of various sports. Description of fundamental motor skills needed to play a sport and perform. Knowledge about elite Sport Personalities	Playfield of various sports, teaching in classroom, availability of various sports equipment. Biographies about sport personalities	Sports selection (any two) : Badminton, Basketball, Cricket, Football, Gymnastics, Hockey, Kabaddi, Kho-Kho, Swimming,Table - Tennis, Tennis, Volleyball Combative Sports: Judo, Wrestling Preparing record book Discussion
Physical, Psycho-social Development	Are we ready for Competition?	Meaning and Types of competitions. Types of Tournament Avenues and levels of competitions	Playground, Classroom Reading Materials	Drawing of Fixtures for competitions namely, Single Knock-out and Single League Assignments

Ethics in Sports	How do you maintain Ethics in Sports? How can we inculcate values through	Introduction and understanding of Ethical and Moral values. Professional values Role of Physical	Playground, Classroom, School Complex, Home, Charts Models, Menacans, Story Telling, anecdotal Reading Material	Opportunities to participate in sports and various group games in fair play Marching, Demonstration of activities and playing various

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
	Physical Education?	Education programmes in inculcating such values		recreational games Story Telling of various sports personalities
Yoga	What is stretching? How can we improve flexibility?	Meaning and importance of stretching and flexibility	Charts, Posters, various visual aids	Learning and Performing of following Asanas: Ugrasana, Dhanurasana, Simhasana, Uttanmandukasana, Kukkutasana, Nauli and Kapalabhati
3. WE AND ENVIRONMENT				
Waste Segregation & Management	What is Waste segregation management ? What is recycling?	Degradable and non-degradable, waste	Laboratory of the School Compost Pits	Observing Compost Pit. Laboratory experiments in school Health and Physical Education Visits to Recycling Units
4. FOOD AND NUTRITION				
Dietary requirements of human body	Why do some people need to eat more?	Knowledge about special dietary requirements in different age groups and professions, pregnant and lactating mothers Ag e and work nature appropriate dietary requirements	Charts, Posters and Recommended dietary requirements for varied nature of work	Preparing dietary requirement as per nature of work and documenting in record book

Dietary Requirements with Special Reference to Sports Participation	What should I eat more to take part in Sports? Why? What are the condition when people need to eat more?	Sports Diet	Information Bulletins	Preparing check-list for various sports and games
Malnutrition	What are different types of	Nutritional needs, nutritional needs of girls	Information and Photographs relation to Mal Nutrition	Discussion Workbook

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
	Malnutrition? What is Anorexia and Bulaemia?	Over Nutrition (obesity), Under Nutrition and effect of these on Health		
5. SAFETY AND SECURITY				
Protection of Self and Others Sexual Harassmen t	How can we protect ourselves and help others in need? What is sexual Harassment?	Knowledge about providing First-Aid in case of drowning, water, fire injuries, injuries on the playfield, burns and the persons to contact after giving first-aid. Coping with accidents Different Dimensions of Sexual Harassment, Gender Sensitization to Sexual harassment, Sexual abuse. Gender equality and changing perception of role stereo types of male and female	Playfield, Classroom, use of dummies. Materials needed for first-aid to meet immediate requirement for certain ailments like cuts, abrasions, sprain, strain etc. Care studies, materials related to Sexual Harassment	Use of sports field and laboratory of health and physical education. Asking students to assimilate materials required to make a first-aid box like bandage, gauge, and crepe bandage, few medicines, gentianbiolet antiseptic liquid etc. - Case studies - Role Play - Discussion
6. SOCIAL HEALTH				
Social Customs	How social customs affect our health?	Impacts of social customs on health care, age at marriage breast feeding, practices, family size, son performance Substance abuse and effect on the family & community Learning self-discipline and guiding others	Reference books Reading Materials	Discussion, Essay Writing, Debate Case study to record

Protection of Natural Resources for Health	What should we do to protect our natural resources?	Keeping clean water and food resources Optimum use of natural resources	Chart Material	Demonstration/visit to find the importance of natural resources Agricultural Resource Water Reserved
Community Education	How can we educate the community on healthy living?	Communication and developing community awareness of health care	Reading Material Chart Poster	Performing the art of communication. Demonstration and presentation of

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
				knowledge for healthy living
7. CONSUMER HEALTH AND SPORTS SERVICES				
Rights and Responsibilities for Health	What are our rights and responsibilities for protecting our health?	Patients rights and responsibilities, Consumer rights and protection, Health and technology including telemedicine Adolescent friendly health services relating to information counseling and other facilities	Rights of consumer through lecture/literature Websites and organizations	Organizing Quiz competition
Agencies Promoting Sports	Which are the organizations promoting sports?	Knowledge about organizations/ associations/ Federations and International Federations	Classroom teaching, Lectures Websites of various organizations	Visit to nearest associations or by participating in various levels of competitions Assignments

Class-X

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
1. HUMAN BODY				
Systems of Human Body	Do you know the effects of exercise on various systems of the body	Knowledge about different types of physical activity inducing changes in our body systems i.e. effect on muscular, circulatory and respiratory system	Benches of different heights, Stair climbing and playground.	Demonstration of various exercises and making students to work on various standardized tests and record their respective fitness levels in a practical file.
Growth and Development	Why does a need to understand Physical, Physiological and Psychological during adolescence?	Process of growing up: hormonal changes, development of secondary sexual characteristic, conception. Pregnancy, sexual development, nocturnal emission.	Materials Films	Discussion Interactive Session
	Can we measure our blood-pressure, pulse rate, respiratory rate, and circumference of body parts?	Basic pharmacology and how does it has impact on the human body and illness, Vital statistics Knowledge about measuring BP, Pulse-rate and Mid arm circumference	Use of visual aids, Sphygmomanometer and stethoscope for measuring blood pressure, tape for measuring circumference	Demonstration of measuring BP, Pulse rate, respiratory rate and mid-arm circumference and students collecting data of their classmates The data collected to be recorded in practical file on quarterly basis.

		Examination of conjunctiva, tongue nail bed etc.		

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
2. ORIENTATION TO PHYSICAL EDUCATION & SPORTS EDUCATION				
Physical Education	How is physical education an integral part of education?	Relationship of physical education with other discipline of knowledge.	Books and various resource materials	Interaction Projects depicting use of various disciplines like Application of Maths, Science, Sociology and Psychology in games and sports/Activities
Tournaments	What are the types of tournaments and drawing of fixtures?	Knowledge about drawing of fixtures Merits and De-merits of each type of fixtures, Scheduling of matches.	Fixtures of various tournaments	Knock-out-Single and double; League – single and double Combination Fixtures: League cum knock- out; knock-out cum league
Sports and Games	How various sports were evolved?	History of games and sports.	Reference books	Track& Field events (any two) Sports and games (any two) : Badminton, Basketball, Cricket, Football, Gymnastics, Hockey, Kabaddi, KhoKho, Swimming, Table-Tennis, Tennis, Volleyball, Combative Sports : Judo, Wrestling Preparing record book
Rules and Regulations of Sports	What are the rules and terminologies governing the sport?	Knowledge about rules needed to understand and play the sport. Awareness about sports	Use of Rules book of various sports	Playing of above stated games and sports

		terminologies		
Playfield Dimensions	Do you know the area required to play various sports?	Measurements/ Dimensions of various sports	Use of Rules book of various sports. Playground. Knowledge from various websites	Visit to various sports stadiums or schools in the vicinity having various sports facilities
Sports Skills	What skills/ Techniques needed to play various sports?	Information about fundamental skills required to	Playground outdoor and indoor sports area	Demonstration Practice

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
		play a sport		
Awards and Rewards in Sports	Are you aware of awards given to outstanding sportspersons	Knowledge about Awards in sports. Various sports personalities on whom these awards conferred	Reference books and various websites	Collection of photographs of various sports personalities and awards and recording in practical file
Yoga	Do we feel stressed?	Stress and factors inducing stress. Role of Yoga in stress management	Photographs, Posters of yogic practices, Audio- visual aids	Demonstration and performing of various Asanas: Shirshasana, Shalabasana, Bakasana, Mayurasana (for boys), Hamsh asana (for girls), Uttana Kurmasana (for boys), Anuloma – viloma
3. WE AND ENVIRONMENT				
Healthy Community living	How do we live in a community?	Importance of camping; Organization of camping; Relationship with community; Inculcation of values to live together	School Premises; Camping sites outside the school	Trekking; Hiking; Rafting; Community interaction; Community involvement; Leadership qualities; Cultural activities
4. FOOD AND NUTRITION				
Insecticides Pesticides Electromagnetic Radiations	Are you aware of Nuclear issues and Electro-magnetic Radiations?	Knowledge about Nuclear issues and electromagnetic radiation.	Books and resource materials	Preparing charts depicting effects of nuclear and electromagnetic radiation

Need for Dietary Planning	What is the need for dietary planning? What are the effects of adulteration ?	Food quality: conservation of food; Food for family; Meal planning and dietary needs; using food as treatment; Food and adulteration.	Reference books and literature depicting dietary needs and calories requirement for various people.	Preparation of diet chart in practical file for various categories and age groups of people.

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
5. SAFETY AND SECURITY				
Occupational health hazards	What is the importance of safety at work place?	First aid Safety while working with machines Handling insecticides, electricity, electric gadgets	Resource Material, Media Material	Discussion and sharing the experiences of peer group
Precautions while taking medicines	What precautions should we take while using medicines? How can these be harmful to our body?	Knowledge about medicines and its side effects on the body Effect of excessive use of medicine Commonly abused substance (drugs) Ways of preventing drug abuse	Medicines, Charts	Discussions and lectures
6. SOCIAL HEALTH				

Education about Health and Role of Institutions (including school, family and sports) in Promoting Health	How can we secure our future? How can we educate people about their health? How can school be helpful in promoting health of each child?	Life planning; Thinking for future; Learning to manage adult interactions; Advocacy and health communicatio n; Children as change agents; School role in health care.	Developing a format for each child Reading material	Screening of health by school authorities. Employing the senior students to record the health data of younger children under the supervision of physical education teacher

Theme/ Sub-Theme	Questions	Key Concepts	Resources	Activities/ Processes
7. CONSUMER HEALTH AND SPORTS SERVICES				
Health Services	Is health insurance essential for every person? What are future careers in health care?	Economics of health care, Health equity, Access to health care, Health care financing including insurance, Careers in health care	Health promoting materials Case Studies	Discussions; Interactive sessions and Quiz competition
Govt. Agencies Promoting games and sports in India	What is the role of Government in sports promotion?	SAI, NSNIS, Institutes of Physical Education, Sports School, CBSE, NCERT Yoga Institutions	Sports and Sports Education Promoting Agencies Literature, Information Institutional Profile Reading Material	Projects Interactive Session

5.7.5 Subject matter for Higher Education levels of Education

PHYSICAL EDUCATION
Class XI (2020–21)
Theory
Max. Marks 70

Unit I Changing Trends & Career in Physical Education Meaning• & definition of Physical Education Aims• & Objectives of Physical Education Career Options in Physical Education• Khelo-India Program• Competitions in various sports at national and international level • Unit II Olympic Value Education Olympics, Paralympics and Special Olympics• Olympic Symbols, Ideals, Objectives• & Values of Olympism International Olympic Committee• Indian Olympic Association• Unit III Physical Fitness, Wellness & Lifestyle Meaning• &

Importance of Physical Fitness, Wellness & Lifestyle Components of physical fitness and Wellness• Components of Health related fitness• Unit IV Physical Education & Aims•Sports for CWSN (Children With Special Needs- Divyang) & objectives of Adaptive Physical Education Organization promoting Adaptive Sports (Special Olympics Bharat; Paralympics;• Concept of Inclusion, its need and Implementation•Deaflympics) Role of various professionals for children with special needs• (Counsellor, Occupational Therapist, Physiotherapist, Physical Education Teacher, Speech Therapist & special Educator) Unit V Yoga Meaning• & Importance of Yoga Elements of Yoga• Introduction - Asanas, Pranayam, Meditation• & Yogic Kriyas Yoga for concentration• & related Asanas (Sukhasana; Tadasana; Padmasana & Relaxation Techniques for improving concentration – Yog-nidra•Shashankasana, Naukasana, Vrikshasana (Tree pose), Garudasana (Eagle pose) Unit VI Physical Activity & Leadership Training Leadership Qualities• & Creating leaders through Physical Education•Role of a Leader Meaning, objectives• & types of Adventure Sports (Rock Climbing, Tracking, River Safety measures to prevent sports injuries•Rafting, Mountaineering, Surfing and Para Gliding) Unit VII Test, Measurement & Evaluation Define Test, Measurement• & Evaluation Importance of Test, Measurement• & Evaluation In Sports Calculation of BMI• & Waist - Hip Ratio Somato Types (Endomorphy, Mesomorphy• & Measurement of health related fitness•Ectomorphy) Unit VIII Fundamentals of Anatomy, Physiology & Kinesiology in Sports Definition and Importance of Anatomy, Physiology• & Kinesiology Function of Skeleton System, Classification of Bones• & Types of Joints Properties and Functions of Muscles• Function• & Structure of Respiratory System and Circulatory System Equilibrium – Dynamic• & Static And Centre of Gravity and its application in sports Unit IX Psychology & Sports Definition• & Importance of Psychology in Phy. Edu. & Sports Define• & Differentiate Between Growth & Adolescent Problems• Developmental Characteristics At Different Stages of Development •Development & Their Management Unit X Training and Doping in Sports Meaning• & Concept of Sports Training Principles of Sports Training• Warming up• & limbering down Skill, Technique• & Style Concept• & classification of doping Prohibited Substances• & their side effects Dealing with alcohol and substance abuse• Practical Max. Marks 30 01. Physical Fitness Test - 6 Marks 02. Proficiency in Games and Sports (Skill of any one Game of choice from the given list*)- 7 Marks 03. Yogic Practices - 7 Marks 04. Record File ** - 5 Marks 05. Viva Voce (Health/ Games & Sports/ Yoga) - 5 Marks * Athletics, Archery, Badminton, Boxing, Chess, Judo, Shooting, Skating, Swimming, Taekwondo, Tennis, Aerobics, Gymastics, Rope-Skipping, Yoga, Bocce & Unified Basketball [CWSN (Children With Special Needs - Divyang)] **Record File shall include: Practical-1: Labelled diagram of 400 M Track & Field with computations. Practical-2: Computation of BMI from family or neighbourhood & graphical representation of the data. Practical-3: Labelled diagram of field & equipment of any one game of your choice out of the above list. Practical-4: List of current National Awardees (Dronacharya Award, Arjuna Award & Rajiv Gandhi Khel Ratna Award) Practical-5: Pictorial presentation of any five Asanas for improving concentration.

PHYSICAL EDUCATION
Class XII (2020–21)
Theory
Max. Marks 70

Unit I Planning in Sports Meaning• & Objectives Of Planning Various Committees• & its Responsibilities (pre; during & Tournament – Knock-Out, League Or Round Robin•post) & Combination Procedure To Draw Fixtures – Knock-Out (Bye• & Seeding) & League (Staircase & Intramural•Cyclic) & Extramural – Meaning, Objectives & Its Significance Specific Sports Programme (Sports Day, Health Run, Run For Fun, Run For Specific Cause• & Run For Unity) Unit II Sports & Nutrition Balanced Diet• & Nutrition: Macro & Micro Nutrients Nutritive• & Eating For Weight Control – A Healthy Weight, The Pitfalls of Dieting, Food Intolerance•Non-Nutritive Components Of Diet & Food Myths Unit III Yoga & Lifestyle Asanas as preventive measures• Obesity: Procedure, Benefits• & contraindications for Vajrasana, Hastasana, Trikonasana, Ardh Matsyendrasana Diabetes: Procedure, Benefits• & contraindications for Bhujangasana, Paschimottasana, Pavan Muktasana, Ardh Matsyendrasana Asthema: Procedure, Benefits• & contraindications for Sukhasana, Chakrasana, Gomukhasana, Parvatasana, Bhujangasana, Paschimottasana, Matsyasana Hypertension: Tadasana, Vajrasana, Pavan Muktasana, Ardha Chakrasana, Bhujangasana,• Sharasana Back Pain: Tadasana, Ardh Matsyendrasana, Vakrasana, Shalabhasana, Bhujangasana• Unit IV Physical Education & Concept of Disability•Sports for CWSN (Children With Special Needs - Divyang) & Types of Disability, its causes•Disorder & Types of Disorder, its cause•nature (cognitive disability, intellectual disability, physical disability) & Disability Etiquettes•nature (ADHD, SPD, ASD, ODD, OCD) Advantage of Physical Activities for children with special needs• Strategies to make Physical Activities assessable for children with special need.• Unit V Children & Women in Sports Motor development• & Exercise Guidelines at different stages of growth•factors affecting it & Common Postural Deformities - Knock Knee; Flat Foot; Round Shoulders; Lordosis, Kyphosis, Bow•Development Legs and Scoliosis and their corrective measures Sports participation of women in India• Special consideration (Menarch• & Female Athletes Triad (Oestoperosis, Amenoria, Eating Disorders)•Menstural Disfunction) Unit VI Test & Measurement in Sports o Motor Fitness Test – 50 M Standing Start, 600 M Run/Walk, Sit & Reach, Partial Curl Up, Push Ups (Boys), Modified Push Ups (Girls), Standing Broad Jump, Agility – 4x10 M Shuttle Run o General Motor Fitness – Barrow three item general motor ability (Standing Broad Jump, Zig Zag Run, Medicine Ball Put – For Boys: 03 Kg & For Girls: 01 Kg) o Measurement of Cardio Vascular Fitness – Harvard Step Test/Rockport Test - Computation of Fitness Index: D uration of the Exercise in Seconds x 100 5.5 x Pulse count of 1-1.5 Min after Exercise o Rikli & Jones - Senior Citizen Fitness Test 1. Chair Stand Test for lower body strength 2. Arm Curl Test for upper body strength 3. Chair Sit & Reach Test for lower body flexibility 4. Back Scratch Test for upper body flexibility 5. Eight Foot Up & Go Test for agility 6. Six Minute Walk Test for Aerobic Endurance Unit VII Physiology & Injuries in Sports Physiological factor determining component of Physical Fitness• Effect of exercise on Cardio Respiratory System• Effect of exercise on Muscular System• Physiological changes due to ageing• Sports injuries: Classification (Soft Tissue Injuries:(Abrasion, Contusion, Laceration, Incision,• Sprain & Strain) Bone & Joint Injuries: (Dislocation,

Fractures: Stress Fracture, Green Stick, Communated, Transverse Oblique & Impacted) Causes, Prevention& First Aid – Aims•treatment & Objectives Unit VIII Biomechanics & Sports Meaning and Importance of Biomechanics in Sports• Types of movements (Flexion, Extension, Abduction• & Newton's Law of Motion•Adduction) & its application in sports Friction• & Sports Unit IX Psychology & Sports Personality; its definition• & types – Trait & Types (Sheldon & Jung Classification) & Big Five Theory Motivation, its type• & techniques Exercise Adherence; Reasons to Exercise, Benefits of Exercise• Strategies for Enhancing Adherence to Exercise• Meaning, Concept• & Types of Aggressions in Sports Unit X Training in Sports Strength – Definition, types• & methods of improving Strength – Isometric, Isotonic & Isokinetic Endurance - Definition, types• & methods to develop Endurance – Continuous Training, Interval Training & Fartlek Training Speed – Definition, types• & methods to develop Speed – Acceleration Run & Pace Run Flexibility – Definition, types• & methods to improve flexibility Coordinative Abilities – Definition• & types Circuit Training - Introduction• & its importance Practical Max. Marks 30 01. Physical Fitness Test - 6 Marks 02. Proficiency in Games and Sports (Skill of any one Game of choice from the given list*)- 7 Marks 03. Yogic Practices - 7 Marks 04. Record File ** - 5 Marks 05. Viva Voce (Health/ Games & Sports/ Yoga) - 5 Marks * Basketball, Football, Kabaddi, Kho-Kho, Volleyball, Handball, Hockey, Cricket, Bocce & Unified Basketball [CWSN (Children With Special Needs - Divyang)] **Record File shall include: Practical-1: Fitness tests administration for all items. Practical-2: Procedure for Asanas, Benefits & Contraindication for any two Asanas for each lifestyle disease. Practical-3: Procedure for administering Senior Citizen Fitness Test for 5 elderly family members. Practical-4: Any one game of your choice out of the list above. Labelled diagram of field & equipment (Rules, Terminologies & Skills).

Sub Unit – VIII

Curriculum design and content- importance, selection and classification of subject matter with reference to age, sex and differently able pupils. Integrated programme for boys and girls.

5.8.1 Importance of Curriculum Design

Teachers design each curriculum with a specific educational purpose in mind. The ultimate goal is to improve student learning, but there are other reasons to employ curriculum design as well. For example, designing a curriculum for middle school students with both elementary and high school curricula in mind helps to make sure that learning goals are aligned and complement each other from one stage to the next. If a middle school curriculum is designed without taking prior knowledge from elementary school or future learning in high school into account it can create real problems for the students.

1. A steady, organized path

Your curriculum is essentially a series of activities and learning outcome goals related to each subject. It serves as a great map, outlining where you need to go and how to get there. Curriculum docs are not created overnight: Aa great deal of thought, time, effort, and expertise go into their development, so don't try to reinvent the wheel.

If you're feeling passionate about putting your own special flair on your teaching, don't fret! While the curriculum charts the path and provides ideas along the way to support your teaching, there is always room for interpretation. Let the curriculum serve as a guide path and sprinkle in your own style as you go. And hey, who doesn't love a good blackline master or curriculum activity? They've been created to help you and your students, so go ahead and use them!

An example of the steady path of structure that a curriculum provides lies in its framework. Larger learning goals are broken down into more specific ones and desired outcomes. In this way, you can see the big picture and better understand how smaller lessons help you teach overarching concepts.

A fifth-grade student in a physical education class may be required to learn 'movement.' That's fairly vague. But if you dig a little deeper, you'll see that your students are to learn how to detect errors in movement, carry out movement sequences, and perform transport skills, along with a few other pieces of the puzzle. Once you see the structure (or organization) of the learning outcome, everything becomes clearer.

2. Progress!

A well-crafted curriculum serves as a reference to ensure that you're on the right track. Its components are designed to develop concepts, from a basic level to increasingly complex topics or skills.

It's important to remember that a curriculum is not an isolated signpost for a single school year. Rather, it's a part of a much bigger puzzle that's connected to the curriculum for every other

grade. Students make progress from year to year. By following the curriculum with your students, you're preparing them to continue on their journey the next year, and each year after, in a more logical and organized fashion.

While learning how to write important sight words and read basic texts are all the rage in one grade, in the next grade, students may be writing longer pieces in the form of short stories and reading more independently with lengthier texts. While adding and subtracting are the crucial skills to learn in the first few years of school, they give way to multiplication, division, and eventually, algebra and calculus as students build upon their foundations.

Progress is essential and curriculum docs allow this sequential learning to take place.

3. Common goals

The goals for each subject area aren't just for students — they're also for teachers. We have goals set out in the curriculum for what we need to teach in a given year, and our students have goals for what they need to learn. Clearly, there's a lot of overlap there; shared goals make it easier for instructors to align their teaching methods with students' academic needs to ensure that they succeed.

Beyond creating shared goals between teachers and students, curriculum also standardizes the learning goals for an entire school and provides a clear path for students to progress from one grade to another. Students must meet certain core competencies before moving on to advanced subjects, such as mastering algebra before ever attempting calculus. Without such a standardized curriculum in place, instructors would have to create their own learning objectives and somehow coordinate with one another to ensure that their students are on track.

Perhaps more importantly, students who complete high school and achieve all the learning objectives set out for them will be ready for post-secondary education or the workforce with a similar baseline of skills, making it easier for employers to identify truly qualified candidates.

4. Always changing

Finally, embracing curriculum is worthwhile for yourself and your students because it's not something static. Docs are regularly revisited and updated to reflect the current needs of students and society at large.

These updates and changes are the results of collaboration and research. Your students will benefit in major ways from the latest information and from having emphasis placed on the skills that are really needed in today's world.

Certain skills or learning goals may fall out of favor over time (hello, cursive writing!) and are generally replaced with more pertinent goals. As a teacher, you know that there simply isn't enough time in a school year to learn everything. Thus, it's especially important to zero in on the most pressing needs and goals for students.

These days, tech skills are high on the list of needs. Students have to be tech-savvy in order to do well in the modern world, and teachers and schools have a responsibility to prepare them for just that (although, my six-year-old is probably surpassing me in the tech-savvy realm at this point … Okay, so maybe we need to teach these basic skills so that our kids and students can help *us* out with technology in a few years!).

Another positive and important shift in curriculum has been one of global citizenship. Students are learning more about how to exist and contribute in a world that is increasingly intertwined and interconnected. Global issues affect everyone in a different manner than in the past. Largely due to technology, we're connected in a way that was not experienced by previous generations, and students need to be able to navigate their role and journey in this global community.

All this goes to show that curriculum must and does change regularly, making it an even more essential foundation on which to base our teaching methods. By effectively using curriculum, you'll be helping your students stay on top of the latest in-demand skills and to have a more coherent learning path.

If designing curricula is like designing any object, process, or system in important respects, it follows that it has these attributes: Curriculum design is purposeful. It is not just to "have" a course of study. Its grand purpose is to improve student learning, but it may have other purposes as well. Whether the purposes are in harmony or in conflict, explicit or implied, immediate or long-range, political or technical, curriculum designers do well to be as clear as possible about what the real purposes are, so that they can respond accordingly. Curriculum design is deliberate. To be effective, curriculum design must be a conscious planning effort. It is not casual, nor is it the sum total of lots of different changes being made in the curriculum over weeks, months, and years. It involves using an explicit process that identifies clearly what will be done, by whom, and when. Curriculum design is creative. Curriculum design is not a neatly defined procedure that can be pursued in a rigorous series of steps. At every stage of curriculum design there are opportunities for innovative thinking, novel concepts, and invention to be introduced. Good curriculum design is at once systematic and creative—feet-on-theground and head-in-the-clouds. Curriculum design operates on many levels. Design decisions at one level must be compatible with those at the other levels. A middle-school curriculum design that is incompatible with the elementary- and high-school designs will almost certainly result in a defective K-12 curriculum, no matter how good each part is on its own. By the same token, the middle-school curriculum itself cannot be effective as a whole unless the designs of its grades are in harmony. Curriculum design requires compromises. The challenge is to come up with a curriculum that works well—perfection is not its aim. In developing a design that meets complex specifications, trade-offs inevitably have to be made among benefits, costs, constraints, and risks. No matter how systematic the planning or how inventive the thinking, curriculum designs always end up not being everything that everyone would want. Curriculum designs can fail. There are many ways in which curriculum designs can fail to operate successfully. A design can fail because one or more of its components fail or because the components do not work well together. Or, the people who have to carry it out may reject the design because they misunderstand it or find it distasteful. In most cases, however, curriculum

designs are neither wholly satisfactory nor abject failures. Indeed, a key element in curriculum design is to provide for continuous correction and improvement, both during the design process and afterward. Curriculum design has stages. Curriculum design is a systematic way of going about planning instruction, even though it does not consist of some inflexible set of steps to be followed in strict order. Curriculum decisions made at one stage are not independent of decisions made at other stages, and so the curriculum-design process tends to be iterative, various stages being returned to for reconsideration and possible modification. But recognizing the different tasks and problems at each stage is important in making the process work.

5.8.2 Selection and classification of subject matter with reference to age, sex and differently able pupils.

Development of a Balanced Curriculum: The existing curriculum is academically-oriented with more emphasis on cognitive development and less consideration on pupils' individual needs, abilities, interests, potentials and developmental history. Apart from this, personal and social development, self-understanding and various levels of life skills training have never been explicitly included in the curriculum as a unique subject. Therefore, when planning the curriculum for maladjusted children, their special needs should be taken into consideration. Besides the basic academic and cultural subjects, there should be appropriate weighting of learning areas in personal and social development. On top of this, a balanced weighting of subjects should be worked out according to the available resources to meet the interest and ability of individual pupils, and give them chances to gain success and pleasure in their school life.

Development of Multiple Intelligences: It has been the practice in the field of education to differentiate children into ability groups through intelligence tests. However, these tests are biased towards assessing abilities in languages and mathematical or logical thinking. Pupils who are slow in developing these two aspects may risk having other potentials left untapped. Howard Gardner (1983), a psychologist of Harvard University, has suggested that human beings possess multiple intelligences. At least the following seven have been detected: linguistic, logical-mathematical, spatial, bodily -kinaesthetic, musical, inter-personal and intra-personal. Gardner's theory has great implications to education since the developmental milestones of each intelligence vary with individuals and every child has his or her unique intellectual profile. Curriculum integration is a good way to nurture children's multiple intelligences through integrated and daily life learning activities. In addition, children can also figure out their own ways to develop different intelligences.

Tailoring with Consideration of Curriculum Continuity and Internal Coherence: Special schools should appropriately adapt the mainstream curriculum by means of simplification, abridgement, reorganisation, extension and selection. Teachers should be given a free hand in this process. At the beginning of each term, schools should call cross-subject curriculum meeting to ensure continuity and coherence of the whole curriculum. The actual curriculum

tailoring should then be systematically conducted as designed by the well-experienced personnel.

Incorporation of Communication and Interpersonal Skills Training: Maladjusted children can establish effective relationship with their immediate environment be it their families, schools or communities only if their communication and interpersonal skills improve significantly. Therefore these skills should be included in the curriculum as a subject, and widely incorporated into other subjects and their school life whenever appropriate. In selection of teaching content and learning activities, teachers should provide children with opportunities to practice the skills of conveying ideas and expressing feelings, so as to promote interpersonal skills and co-operation. Apart from it, teachers can also observe and assess children's progress.

Relevance to Daily Living: The vast majority of maladjusted children incline to crave for immediate gratification and short term interest. Therefore, the content of their curriculum needs to be relevant in order to be meaningful. Generally speaking, the existing mainstream curriculum fails to motivate them to learn since it is too academic to include sufficient consideration in its practical value in day to day living. In selecting and delivering their curriculum, it is essential to include daily life materials to ensure that learning is meaningful for them. For pupils with more severe problems, the difficulties in selecting suitable curriculum for them are aggravated by their unfavorable experiences which give them a distorted view of life. So they need a more specially designed curriculum.

Content Comparable to Their Developmental Stage and Attainment Level: In comparison with peer of the same age, maladjusted children are generally backward in attainment. This complicates the selection of teaching materials. Standard teaching materials appropriate to their attainment level may be too childish for them while those comparable to their life experience would be too advanced academically. Hence, teachers have to re-write or revise the standard teaching materials according to the developmental stages and attainment levels of their pupils.

Integration of Theoretical Studies and Practical Work: Owing to their short attention span, pupils cannot stand passive learning for long. This will easily lead to discipline and management problems. So blending the theoretical study with practical work and ensuring pupils' participation during the course can help to sustain their interest and sense of achievement. It in turn motivates their further learning.

Attention to Individual Differences: Although there are problems common to these pupils, there is a large discrepancy among them in learning and emotional difficulties. So without depriving pupils of appropriate group interaction, rooms and flexibility in the curriculum design should be allowed in order to cater for their individual needs.

Realistic Review of Achievement through Timely and Continuous Formative and Summative Assessment: The traditional norm reference assessment can only increase their sense of failure. Besides, these children are easily disturbed by their emotions and thus may

affect their performance during the assessment. Therefore, continuous formative assessment at appropriate stages of learning can be more accurate in revealing the effectiveness of their learning. Besides, the assessment should be target-oriented and the means need to be diversified. Through this process, teachers can get feedback on the effectiveness of their teaching and also pupils can be immediately informed of teachers' comment on their performance, thus reducing their anxiety and gradually establishing confidence in school work.

Multi-disciplinary Approach in Curriculum Design and Delivery: Since enhancing personal and social development is important in achieving the aims of education for maladjusted pupils, professionals concerned can render educational and counseling services. So, their participation in curriculum design and delivery should be encouraged. As a conclusion for this section, maladjusted children require a curriculum which lays heavier emphasis on personal social development. As for the effectiveness of any curriculum, it relies on appropriate means of delivery other than a good structure and content.

Special needs education is designed to facilitate learning by individuals who, for a wide variety of reasons, require additional support and adaptive pedagogical methods in order to participate and meet learning objectives in an education programme. Formal special needs education is treated similarly to other initial education programmes provided the main aim of these programmes is the educational development of the individual. Programmes in special needs education may follow a similar curriculum to that offered in the parallel regular education3 system but they take individual needs into account by providing specific resources (e.g. specially-trained personnel, equipment or space) and, if appropriate, modified educational content or learning objectives. These programmes can be offered to individual students within already-existing education programmes or as a separate class in the same or separate educational institutions. All students in special education programmes should be assigned to specific ISCED levels, either directly or by estimation. They should not be treated as a separate level of education.
So, if we have decided we want inclusion (for whatever reason and at whatever Level), how do we get there? Dyson et al. (2002), in a systematic review of the effectiveness of school-level actions for promoting participation by all students, implied a broad definition of inclusion in their research question: 'What evidence is there that mainstream schools can act in ways which enable them to respond to student diversity so as to facilitate participation by all students in the cultures, curricula and communities of those schools?' They concluded that:
1 'Some schools are characterised by an "inclusive culture." Within such schools, there is some degree of consensus amongst adults around values of respect for difference and a commitment to offering all students access to learning opportunities. This consensus may not be total and may not necessarily remove all tensions or contradictions in practice. On the other hand, there is likely to be a high level of staff collaboration and joint problem-solving, and similar values and commitments may extend into the student body and into parent and other community stakeholders in the school.
2 The extent to which such "inclusive cultures" lead directly to enhanced student participation is not clear from the research evidence. Schools characterised by such cultures are likely to be characterised by forms of organisation (such as specialist provision being made in the ordinary

classroom rather than by withdrawal) and practice (such as constructivist approaches to teaching and learning) which could be regarded as participatory by definition.
3 Schools with "inclusive cultures" are likely to be characterised by the presence of leaders who are committed to inclusive values and to a leadership style which encourages a range of individuals to participate in leadership functions.
4 Such schools are likely to have good links with parents and with their communities.
5 The local and national policy environment can act to support or to undermine the realisation of schools' inclusive values.' A number of publications offer advice about creating inclusive educational environments. The fourth section in this book considers Action in Schools and the fifth section Promoting and Managing Systemic Change in schools.
Advocates such as Ainscow (1999), Allan (1999), Cheminais (2001) and Lorenz (2002) give broad guidelines. Other authors suggest quite specific practical strategies, not only in the special needs area (e.g. Tilstone and Rose, 2003), but also in other areas such as gender equity (e.g. Horgan, 1995; Noble et al., 2001) and bilingualism (Gardner, 2002; Smyth, 2003). Continuing Professional Development (in-service training) for relevant staff (not only teachers) is obviously important (Hopkins, 2002). Gross and White (2003) (among others) propose a whole-school inclusion audit leading to consideration of arrangements to train, deploy, support and effectively manage relevant staff. Daniels et al. (1997) propose the development of teacher support teams in both primary and secondary schools to facilitate peer support at the local level. Developing an inclusive school can be firmly set in wider issues of overall school effectiveness and school improvement. However, moving towards inclusion can be a slow process, testing the frustration tolerance of the most patient individual. As many factors need to come together for successful systemic change, and the absence of only one can thwart progress. Adoption of ideas in theory is a start, but adoption of those ideas in practice can take much longer. The speed of adoption in theory depends partially upon clarity of conceptualisation and exemplification and the absence of overt conflict with ruling cultural value judgements, leading to gradual initial acceptance of the idea, which then begins to permeate prevailing public opinion and eventually becomes enshrined in regulation or legislation.

5.8.3 Integrated programme for boys and girls.

Co-operative learning is a method of promoting co-operation among pupils rather than competition. Essentially, pupils work together to seek solutions for the problems instead of competing against one another. Two important elements of co-operative learning are motivation induced from and accomplishment of the tasks through co-operation. It also provides opportunities for pupils to gain a sense of achievement by recognition from the group.

Four models of co-operative learning have been developed:

(a) Jig-saw approach Each pupil is assigned one part of the task which is to be assembled into a whole when finished.

(b) Group work Pupils contribute their knowledge in their groups to complete the task.

(c) Inter-team competition Pupils are grouped into learning teams. After teachers have presented new teaching contents, each team is to practise what they have learned by doing worksheets. Team members may questions each other, work in pairs, or by any ways of

cooperation to enable all team members to acquire the knowledge just learned. Finally, through individual questioning, scores are compiled together to get a team score upon which the winner for the inter-team competition will be decided.

(d) Team support approach Pupils are requested to learn again what they have not mastered. They can seek help from either their teachers or peers, and practise until they master the content. Then the class can proceed to the more advanced topic.

Peer tutoring is the systematic guidance to some junior class or academically less able pupils by teacher selected peers from senior classes or the better functioning and behaving pupils. These young tutors are trained beforehand the basic principles of remedial work and their duties.

Studies have indicated that peer tutoring is beneficial academically and non-academically to both the young tutors and the pupils under their guidance. Pupils being helped, besides showing progress academically, are improving in non-academic aspects such as attendance rate and discipline. To the young tutors, they are given the chance of leadership training and practice. Their confidence and sense of belonging to the school is enhanced at the same time. This approach can be implemented in groups or individually.

Besides the selection of young tutors and their training, its success depends very much on teachers' supervision throughout the process. This includes contracting and monitoring the attendance so that both the young tutors and pupils being helped are working according to schedule.

In her 1978 quantitative study, Katherine Clarricoates conducted field observations and interviews with British primary school teachers from a range of schools located in both rural and urban and wealthy and less wealthy areas. Her study confirms that Rodgers' assertions about gender stereotypes and discrimination were widely seen in the classrooms. In an extract from one of the interviews, a teacher claimed that it is "subjects like geography…where the lads do come out…they have got the facts whereas the girls tend to be a bit more woollier in most of the things". Meanwhile, other teachers claimed that "they (girls) haven't got the imagination that most of the lads have got" and that "I find you can spark the boys a bit easier than you can the girls…Girls have got their own set ideas – it's always '…and we went home for tea'… Whereas you can get the boys to write something really interesting…". In another interview, a teacher perceived gender behavioral differences, remarking "…the girls seem to be typically feminine whilst the boys seem to be typically male…you know, more aggressive... the ideal of what males ought to be", while another categorized boys as more "aggressive, more adventurous than girls". When considering Bem's gender schema theory in relation to these statements, it is not difficult to see how male and female pupils may pick up various behavioral cues from their teachers' gender differentiation and generalizations which then manifest themselves in gendered educational interests and levels of attainment. Clarricoates terms this bias the "hidden curriculum" as it is deviant from the official curriculum which does not discriminate based on gender. She notes that it arises from a teacher's own underlying beliefs about gendered behavior and causes them to act in favor of the boys but to the detriment of the girl pupils. This ultimately leads to the unfolding of a self-fulfilling prophecy in the

academic and behavioral performances of the students. Citing Patricia Pivnick's 1974 dissertation on American primary schools, Clarricoates posits that

> It is possible that by using a harsher tone for controlling the behavior of boys than for girls, the teachers actually foster the independent and defiant spirit which is considered 'masculine' in our culture…At the same time, the 'femininity' which the teachers reinforced in girls may foster the narcissism and passivity which results in lack of motivation and achievement in girls.

This analysis highlights the lifelong hindrances that the "hidden curriculum" of teachers can inflict on both genders.

Sub Unit – X

Curriculum evaluation: Concepts and purpose; procedure and appraisal.

5.10.1 Concept of Curriculum Evaluation

In reviewing the literature and acquiring a broader understanding of purpose, two concepts delineated by Guba and Lincoln (1981) seem especially useful: merit and worth. Merit, as they use the term, refers to the intrinsic value of an entity—value that is implicit, inherent, and independent of any applications. Merit is established without reference to a context. Worth, on the other hand, is the value of an entity in reference to a particular context or a specific application. It is the "payoff" value for a given institution or group of people. Thus, a given English course may seem to have a great deal of merit in the eyes of experts: It may reflect sound theory, be built on current research, and embody content that experts deem desirable. The same course, however, may have relatively little worth for a teacher instructing unmotivated working-class youth in an urban school: It may require teaching skills that the teacher has not mastered and learning materials that the students cannot read. In this sense, then, curriculum evaluation should be concerned with assessing both merit and worth. The foci of curriculum evaluation also need to be expanded. To use the concepts of this present work, curriculum evaluation should be concerned with assessing the value of a program of study (all the planned learning experiences over a multiyear period for a given group of learners), a field of study (all the planned learning experiences over a multiyear period in a given discipline or area of study), and a course of study (all the planned learning experiences for a period of 1 year or less in a given field of study). All three levels of curriculum work are important. Substantive differences exist between evaluating a program of study and a field of study, and differences of scope exist between evaluating a field of study and a course of study.

5.10.2 Purpose of Curriculum Evaluation

1. Can be implemented without making inordinate demands upon district resources
2. Can be applied to all levels of curriculum—programs of study, fields of study, courses of study
3. Makes provisions for assessing all significant aspects of curriculum—the written, the taught, the supported, the tested, and the learned curricula
4. Makes useful distinctions between merit (intrinsic value) and worth (value for a given context)
5. Is responsive to the special concerns of district stakeholders and is able to provide them with the data they need for decision making
6. Is goal oriented, emphasizing objectives and outcomes
7. Is sensitive to and makes appropriate provisions for assessing unintended effects
8. Pays due attention to and makes provisions for assessing formative aspects of evaluation
9. Is sensitive to and makes provisions for assessing the special context for the curriculum
10. Is sensitive to and makes provisions for assessing the aesthetic or qualitative aspects of the curriculum
11. Makes provisions for assessing opportunity cost—the opportunities lost by those studying this curriculum
12. Uses both quantitative and qualitative methods for gathering and analyzing data
13. Presents findings in reports responsive to the special needs of several audiences

14. Are the goals of this subject clearly and explicitly stated and readily accessible to those who need to refer to them?
15. Are those goals congruent with relevant curricular goals of the school district?
16. Are the goals in accord with the recommendations of experts in the field?
17. Are the goals understood and supported by parents?
18. Are the goals understood and supported by school administrators?
19. Are the goals understood and supported by classroom teachers?
20. Are the goals understood and supported by students?
21. Have the goals of this field been analyzed into a set of grade-level (or achievement level) objectives that identify the important concepts, skills, and attitudes to be attained?
22. Are those level objectives sufficiently comprehensive so that they adequately reflect the goals of this field?
23. Are those level objectives clearly displayed in some form (such as a scope-and-sequence chart) that facilitates understanding and use?
24. Are the level objectives in accord with and do they reflect the recommendations of experts in the field?
25. Does the grade placement of objectives reflect the best current knowledge of child development?
26. Does the grade placement of objectives provide for sufficient reinforcement without undue repetition?
27. Is the grade placement of objectives appropriate in relation to their difficulty for learners at that level?
28. Are the objectives appropriately distributed over the grades so that there is balance between the grades?
29. Are there written course guides for this field covering all grade levels?
30. Are those guides readily available to administrators, teachers, and parents?
31. Does the format of the guides facilitate revision and amplification?
32. Do the guides clearly specify grade-level objectives in a format and manner that facilitate use?
33. Do the guides make appropriate distinctions between mastery, organic, and enrichment outcomes and focus primarily on the mastery outcomes?
35. Do the guides indicate clearly the relative importance of the mastery outcomes and suggest time allocations that reflect their importance?

5.10.3 Procedure of Curriculum Evaluation

Bradley's Effectiveness Model How can a developed curriculum be assessed and evaluated for effectiveness? Bradley's (1985) book Curriculum Leadership and Development Handbook provides 10 key indicators that can be used to measure the effectiveness of a developed curriculum. The chart is designed to help you identify your perceptions regarding the 10 indicators to appraise curriculum effectiveness in your school building or district. To assess how your school or district meets each of the indicators, respond with a Yes or No in the column provided. The indicators for effective curriculum development represent working characteristics that any complex organization must have in order to be responsive and responsible to its clients. Further, the measurement can be oriented to meet the needs of any school district— from large to small—and it can focus on a specific evaluation of a district's

curriculum area, such as reading, language arts, math, or any content area designated. The models (Tyler's objectives-centered model; Stufflebeam's context, input, process, product model; Scriven's goal-free model; Stake's responsive model, and Eisner's connoisseurship model) presented below give some support to Bradley's effectiveness model.

Tyler's Objectives-Centered Model One of the earliest curriculum evaluation models, which continues to influence many assessment projects, was that proposed by Ralph Tyler (1950) in his monograph Basic Principles of Curriculum and Instruction. As explained in this work and used in numerous large-scale assessment efforts, the Tyler approach moved rationally and systematically through several related steps: 1. Begin with the behavioral objectives that have been previously determined. Those objectives should specify both the content of learning and the student behavior expected: "Demonstrate familiarity with dependable sources of information on questions relating to nutrition." 2. Identify the situations that will give the student the opportunity to express the behavior embodied in the objective and that evoke or encourage this behavior. Thus, if you wish to assess oral language use, identify situations that evoke oral language. 3. Select, modify, or construct suitable evaluation instruments, and check the instruments for objectivity, reliability, and validity. 4. Use the instruments to obtain summarized or appraised results. 5. Compare the results obtained from several instruments before and after given periods in order to estimate the amount of change taking place. 6. Analyze the results in order to determine strengths and weaknesses of the curriculum and to identify possible explanations about the reason for this particular pattern of strengths and weaknesses. 7. Use the results to make the necessary modifications in the curriculum. (as cited in Glatthorn, 1987, p. 273) The Tyler model has several advantages: It is relatively easy to understand and apply. It is rational and systematic. It focuses attention on curricular strengths and weaknesses, rather than being concerned solely with the performance of individual students. It also emphasizes the importance of a continuing cycle of assessment, analysis, and improvement. As Guba and Lincoln (1981) pointed out, however, it suffers from several deficiencies. It does not suggest how the objectives themselves should be evaluated. It does not provide standards or suggest how standards should be developed. Its emphasis on the prior statement of objectives may restrict creativity in curriculum development, and it seems to place undue emphasis on the preassessment and postassessment, ignoring completely the need for formative assessment. Similarly, Baron and Boschee (1995), in their book Authentic Assessment: The Key to Unlocking Student Success, stress that "we are encountering fundamental changes in the way we view and conduct assessment in American schools" (p. 1). And "sixty years have passed since we experienced such a deep-seated and thoughtful revaluation of our assessment methods".

Stufflebeam's Context, Input, Process, Product Model These obvious weaknesses in the Tyler model led several evaluation experts in the late 1960s and early 1970s to attack the Tyler model and to offer their own alternatives. The alternative that had the greatest impact was that developed by a Phi Delta Kappa committee chaired by Daniel Stufflebeam (1971). This model seemed to appeal to educational leaders because it emphasized the importance of producing evaluative data for decision making; in fact, decision making was the sole justification for evaluation, in the view of the Phi Delta Kappa committee. To service the needs of decision makers, the Stufflebeam model provides a means for generating data relating to four stages of program operation: context evaluation, which continuously assesses needs and problems in the context to help decision makers determine goals and objectives; input evaluation, which

assesses alternative means for achieving those goals to help decision makers choose optimal means; process evaluation, which monitors the processes both to ensure that the means are actually being implemented and to make the necessary modifications; and product evaluation, which compares actual ends with intended ends and leads to a series of recycling decisions. During each of these four stages, specific steps are taken: • The kinds of decisions are identified. • The kinds of data needed to make those decisions are identified. • Those data are collected. • The criteria for determining quality are established. • The data are analyzed on the basis of those criteria. • The needed information is provided to decision makers. (as cited in Glatthorn, 1987, pp. 273–274) The context, input, process, product (CIPP) model, as it has come to be called, has several attractive features for those interested in curriculum evaluation. Its emphasis on decision making seems appropriate for administrators concerned with improving curricula. Its concern for the formative aspects of evaluation remedies a serious deficiency in the Tyler model. Finally, the detailed guidelines and forms created by the committee provide stepby-step guidance for users. The CIPP model, however, has some serious drawbacks associated with it. Its main weakness seems to be its failure to recognize the complexity of the decision-making process in organizations. It assumes more rationality than exists in such situations and ignores the political factors that play a large part in these decisions. Also, as Guba and Lincoln (1981) noted, it seems difficult to implement and expensive to maintain.

Scriven's Goal-Free Model Michael Scriven (1972) was the first to question the assumption that goals or objectives are crucial in the evaluation process. After his involvement in several evaluation projects where so-called side effects seemed more significant than the original objectives, he began to question the seemingly arbitrary distinction between intended and unintended effects. His goal-free model was the outcome of this dissatisfaction. In conducting a goal-free evaluation, the evaluator functions as an unbiased observer who begins by generating a profile of needs for the group served by a given program(Scriven is somewhat vague as to how this needs profile is to be derived). Then, by using methods that are primarily qualitative in nature, the evaluator assesses the actual effects of the program. If a program has an effect that is responsive to one of the identified needs, then the program is perceived as useful. Scriven's main contribution, obviously, was to redirect the attention of evaluators and administrators to the importance of unintended effects—a redirection that seems especially useful in education. If a mathematics program achieves its objectives of improving computational skills but has the unintended effect of diminishing interest in mathematics, then it cannot be judged completely successful. Scriven's emphasis on qualitative methods also seemed to come at an opportune moment, when there was increasing dissatisfaction in the research community with the dominance of quantitative methodologies. As Scriven himself notes, however, goal-free evaluation should be used to complement, not supplant, goal-based assessments. Used alone, it cannot provide sufficient information for the decision maker. Some critics have faulted Scriven for not providing more explicit directions for developing and implementing the goal-free model; as a consequence, it probably can be used only by experts who do not require explicit guidance in assessing needs and detecting effects.

Stake's Responsive Model Robert Stake (1975) made a major contribution to curriculum evaluation in his development of the responsive model, because the responsive model is based explicitly on the assumption that the concerns of the stakeholders—those for whom the evaluation is done—should be paramount in determining the evaluation issues. He made the

point this way: To emphasize evaluation issues that are important for each particular program, I recommend the responsive evaluation approach. It is an approach that trades off some measurement precision in order to increase the usefulness of the findings to persons in and around the program. . . . An educational evaluation is a responsive evaluation if it orients more directly to program activities than to program intents; responds to audience requirements for information; and if the different value perspectives present are referred to in reporting the success and failure of the program. (p. 14) Stake recommends an interactive and recursive evaluation process that embodies these steps: • The evaluator meets with clients, staff, and audiences to gain a sense of their perspectives on and intentions regarding the evaluation. • The evaluator draws on such discussions and the analysis of any documents to determine the scope of the evaluation project. • The evaluator observes the program closely to get a sense of its operation and to note any unintended deviations from announced intents.

• The evaluator discovers the stated and real purposes of the project and the concerns that various audiences have about it and the evaluation. • The evaluator identifies the issues and problems with which the evaluation should be concerned. For each issue and problem, the evaluator develops an evaluation design, specifying the kinds of data needed. • The evaluator selects the means needed to acquire the data desired. Most often, the means will be human observers or judges. • The evaluator implements the data-collection procedures. • The evaluator organizes the information into themes and prepares "portrayals" that communicate in natural ways the thematic reports. The portrayals may involve videotapes, artifacts, case studies, or other "faithful representations." • By again being sensitive to the concerns of the stakeholders, the evaluator decides which audiences require which reports and chooses formats most appropriate for given audiences. (as cited by Glatthorn, 1987, pp. 275–276) Clearly, the chief advantage of the responsive model is its sensitivity to clients. By identifying their concerns and being sensitive to their values, by involving them closely throughout the evaluation, and by adapting the form of reports to meet their needs, the model, if effectively used, should result in evaluations of high utility to clients. The responsive model also has the virtue of flexibility: The evaluator is able to choose from a variety of methodologies once client concerns have been identified. Its chief weakness would seem to be its susceptibility to manipulation by clients, who in expressing their concerns might attempt to draw attention away from weaknesses they did not want exposed.

Eisner's Connoisseurship Model Elliot Eisner (1979) drew from his background in aesthetics and art education in developing his "connoisseurship" model, an approach to evaluation that emphasizes qualitative appreciation. The Eisner model is built on two closely related constructs: connoisseurship and criticism. Connoisseurship, in Eisner's terms, is the art of appreciation—recognizing and appreciating through perceptual memory, drawing from experience to appreciate what is significant. It is the ability both to perceive the particulars of educational life and to understand how those particulars form part of a classroom structure. Criticism, to Eisner, is the art of disclosing qualities of an entity that connoisseurship perceives. In such a disclosure, the educational critic is more likely to use what Eisner calls "nondiscursive"—a language that is metaphorical, connotative, and symbolic. It uses linguistic forms to present, rather than represent, conception or feeling. Educational criticism, in Eisner's formulation, has three aspects. The descriptive aspect is an attempt to characterize and portray the relevant qualities of educational life—the rules, the regularities, the underlying architecture. The interpretive aspect uses ideas from the social sciences to explore meanings and develop

alternative explanations—to explicate social phenomena. The evaluative aspect makes judgments to improve the educational processes and provides grounds for the value choices made so that others might better disagree. The chief contribution of the Eisner model is that it breaks sharply with the traditional scientific models and offers a radically different view of what evaluation might be. In doing so, it broadens the evaluator's perspective and enriches his or her repertoire by drawing from a rich tradition of artistic criticism. Its critics have faulted it for its lack of methodological rigor, although Eisner has attempted to refute such charges. Critics have also argued that use of the model requires a great deal of expertise, noting the seeming elitism implied in the term connoisseurship.

Connoisseurship Model The model recommends a process called educational criticism and connoisseurship. Thus, it is markedly different from the other models, which draw heavily on the quantitative technical posture of evaluation. The connoisseurship model, on the contrary, tries to furnish a qualitative description of educational life as a consequence of new programmes. We should note here that Eisner (1985), the propounder of this model, draws heavily from the arts to strengthen his stance. He states, for example, that if an individual is to be an illuminating critic of painting, film etc., he/she must be a connoisseur. In other words, hdshe must possess a great deal of knowledge about and experience with the type of phenomenon he/she is to criticize. Further, the critic needs to have an awareness and appreciation of the subtle qualities of the situation and write about the nuances of the situation in ways that help others to become more aware of the phenomenon under consideration. In essence, Eisner points out that educational connoisseurship is the art of appreciating what is educationally significant. But such appreciation is made public through criticism - the description, interpretation and assessment of the situation. In discussing his approach to evaluation, Eisner relies on the following two elements instead of scientific validity: i) Referential adequacy: it requires the critic to check the critical observation and interpretations are empirically grounded. It allows the reader to experience the evaluated phenomenon in a new and better way. ii) Structural corroboration: it is a continuous inquiry about whether the various parts to the criticism fit together as a consistent whole. Besides, he stresses the importance of analyzing the works of students during the evaluation process by noting down what is said and done, rather than what is not done. Eisner, thus, advocates describing the 'tone' of the curriculum in action and the educational scene.

5.10.4 Appraisal of Curriculum Evaluation

Evaluation may be considered as a broad and continuous effort to find out the effects of implementing content and procedures to achieve pre-set goals. It is not content specific but is a methodological process. Michael Scriven feels that evaluation essentially co~~sists of gathering and combining data in relation to a weighted set of goals or scales so as to allow people to make judgements about worth. [Ornstein and Hunkins, 1988.1 How people process data is determined to a large extent by their philosophical and psycholog~cal onentations. Humanists would argue that qbantitative expression of lqarning outcomes are insufficient to determine the quality of learning. They feel that the karning experience is important in itself and should have helped the students in enhancing their self-concept. A behaviourist, would Approach evaluation from a sequenced orientation, i.e. objectives will be clearly stated and relevant activities would be performed to achieve the intended outcomes. Whatever the orientation or posture adopted by the educator, evaluation st 111 involves two dimentions -

management and decision-making. They have to obtain data on which judgements will be based; communicate the effectiveness of curriculum to students and others; determine criteria to judge various aspects of curriculum and devise a management plan fqt. all involved in the curriculum process.

Scientistic and Humanistic Approaches: Cronbach (1 982) has identified two approaches to evaluation - the scientistic ideals approach and the humanistic ideals approach. He has presented these two approaches at the two ends of an evaluation continuum. The scientistic end advocates experimentation and the humanistic end does not have faith in experimentation. The scientistic ideals believer focusses on experiment: "A true experiment ... concentrates on outcome or impact and embodies three procedures : (I) Two or more conditions are in place, at least one of them being the consequence of deliberative intervention. (2) Persons or institutions are assigned to conditions in a way that creates equivalent groups. (3) All participants are assessed on the same outcome measures" (Cronbach, 1982). In this approach all efforts are focussed on the learners. Students' achievements in different situations are compared by way of test scores. Quantitative measures are adopted for data collection and statistical tools are employed for data analysis. The humanistic ideals approach according to Cronbach is on the other end of the evaluation continuum. He describes it as very different from the scientific ideals approach : "Writers at the humanistic extreme find experiments unacceptable. For them, naturalistic case studies are the panacea. A humanist would study a program already in place, not one imposed by the evaluator. If persons are assigned to a treatment, that is because the policy under study calls for assignment; assignmepts are not made for the sake of research. The programme is to be seen through the eyes of its developers and clients. Naturalistic investigators would ask different questions of different programmes. Benefits are to be described, not reduced to a quality. Observations are tq .be opportunistic and responsive to the local scene and not pre-structured. Analysis of data collected through humanistic approach differs significantly from that collected through scientific approach. Data collected through the former are more qualitative than quantitative. The techniques employed are basically observation, interviews, personal meetings and discussions with participants. However cumculum evaluators tend to adopt a middle approach i.e. somewhere between the two ends of the continuum.

Intrinsic and Pay-off Evaluation: Evaluators may look at a cumcular programme directly while others could study it quantitatively after it is implemented. The first type is called intrinsic evaluation by Michael Scriven (1978). The evaluators merely answer the question, "How good is the curriculum? ", instead of evaluating it on any criteria. Scriven cites the example of studying an axe to explain intrinsic evaluation. An individual would study an axe by examining the following aspects; design of the bit, the material used, the weight distribution, shape and fit of the handle. People assume that an axe of such dimensions would cut trees but they do not try it directly. Intrinsic evaluation of curricula implies that evaluators study the content, its sequence, organization, accuracy, learning experiences provided etc. They believe that with an accurate content and organization student learning would be stimulated. Most of the times evaluators tend to neglect the concept of intrinsic evaluation. Instead of asking the question, "How good is the cumculum?'They ask, "How well does the course or cumculum achieve its goals?" Educators must however egtablish the worth of the cumculum, its goals, objectives and related content. According to Scriven, pay-off evaluation occurs when the effects of the delivered curriculum are examined and its worth has been established. The effects

of the cumculum on learners can be determined since this evaluation involves judgements based on pretest post-test scores or experimental group tests and control group tests and other parameters. Apart from students, its effects can be examined on teachers, parents and administrators. This allows evaluators to measure the Curriculum Evaluation attainment of objectives by learners which intrinsic evaluators cannot gauge. On the other hand, supporters of intrinsic evaluation counter that outcomes of curriculum do not actually show up because the present testing instruments and scoring procedures are laced with their short-comings. They also feel that to examine the full worth of a curriculum, the materials should be looked at directly rather than at students' test scores. (Ornstein and Hunkins, 1988.)

Formative and Summative Evaluation: Choice of evaluation techniques also depends on the kind of decisions that evaluators have to make. In this context, two terms are used, formative and summative evaluation. Formative evaluation aims to improve an existing programme based on the feedback obtained from the evaluation. Hence, programme developers must be frequently lxov~ded with detailed and specific information to guide them in the developmental phase. On this basis evaluators can revise the programme while it is being developed, before it can be implemented on a large scale. Formative evaluation can occur at several stages during the curriculum development process. At any stage the validity of the content can be checked, i.e. whether students are achieving the stated goal or objective by going through the content, if not then that content could be modified. Cronbach (1 990) has provided guidelines for conducting formative evaluation in an article where he has spoken of course improvement through evaluation. The important steps highlighted are: 1. "Seek data regarding changes produced in pupils by the course. 2. Look for multi-dimensional outcomes and map out the effects of the course along these dimensions separately. 3. Identify aspects of the course in which revisions are desirable. 4. Collect evidence midway in curriculum development, while the course is still tluid. 5. Try to find out how the course produces its effect and what factors influence its effectiveness. You may find that the teacher's attitude toward the learning opportunity is more important than the opportunity itself. 6. During trial stages, use the teacher's informal reports of observed pupil behaviour in aspects of the course. 7. Make more systematic observations, but only after the more obvious flaws in the early stages have been dealt with. 8. Make a process study of events taking place in the classroom, and u'se proficiency and attitude measures to reveal changes in pupils. 9. Observe several results of the new programme ranging far beyond the content of the curriculum itself - attitudes, general understanding, aptitude for further . learning and so forth." Evaluators differ in their ways of conducting formative evaluation. If they are evaluating only one unit plan then it would involve only those teaching the unit. However, if they are devising a new programme for the entire district then it would involve aformal and systematic procedure. Since curriculum development takes place over a span of time it provides opportunity for guiding and shaping the curriculum. According to Gronlund (1985) it gives the teachers an opportunity to record both intended and unintended effects. The curriculum process is kept "open" since feedback is used and adjustments are made. , Summative evaluation assesses the effect of a complete programme. It is camed out at the elid of an educational programme. It gives the picture of the curriculum intotality once it has been implemented on the learners. The effectiveness of the entire curriculum can be assessed through summative evaluation, or also of a particular programme or course within the curriculum. This type of evaluation is based on the evidence about "Summed" effects of various components or units in the cumculum, and hence it derives its

name from it. The people involved in the curriculum process can conclude how successfully the curriculum has worked. Since summative evaluation is carried out at the end of the curriculum activity it should not be construed as a one time affair only. It can occur at the end of some curricular - unit plans. Summative evaluation could also be planned at certain points during the curriculum development process, for example, at the end of the first try out stage before the final implementation. This would help evaluators to check a curricular programme as it evolves into the final product. Whereas formative' evaluation uses informal methods and processes, summative evaluation uses formal tools for gathering data. Tests are carefully designed for attainment of objectives. Teachers' reactions are assessed formally through carefully prepared surveys. Students are assessed through tests at the end of the course or at the year end. One of the main pwposes of sumrnative evaluation is to select from several completing curricularprogrammes, the one, which should be accepted, and those which should be discontinued. An experimental design would suit the purpose best. James Popham has illustrated such designs. He talks about the PretestIPosttest control group design. Students are pretested on specified dimensions of the programs. After instruction, students in the different programs are tested for the attainment of a common set of objectives of the programs. Evaluators should not be biased towards any one set of objectives, but objectives set by other designers should also be tested. Students afy randomly assigned to the programs so that each has an equal chance of being assigned to any programme. Differences in learner achievement would be due to differences in the programmes. Here the experimental unit of analysis is not the pupil, but schools or classrooms. If pupils of the same class are subjected to different programs, then the pupil becomes the unit of analysis. (Popham, 1988.)