

Report of the  
Physical Education Committee  
1937



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## CHAPTER I

### Introduction

1. By Resolution No. 5310 of the Government of Bombay, Education Department, dated 17th September 1937, the Government of Bombay were pleased to appoint the following Committee to advise them on the question of physical education in primary and secondary schools in the Presidency of Bombay :—

#### *Chairman*

Swami Kuvalayananda, Lonavla.

#### *Members*

Mrs. Faiz B. Tyabji, M.L.A., Bombay.

The Assistant Director of Public Instruction.

Captain Ganapatrao Modak, Thalakwadi, Belgaum.

Mr. M. R. Paranjpe, M.A., B.Sc., Poona.

Dr. M. N. Natu, B.Sc., M.B. B.S., District Scout Commissioner, Poona.

Mr. C. B. Purani, M.L.A., Ahmedabad (Secretary).

The resolution further directed that Mr. C. B. Purani should be the Secretary of the Committee, that he should also act as the convener of the same, and that the Committee should elect its own Chairman.

The abovementioned resolution (No. 5310) was partially modified on 6th October 1937 and Mr. S. S. Cameron, Officer on special duty in the office of the Director of Public Instruction, was appointed as a member of the Physical Education Committee in the place of the Assistant Director of Public Instruction.

2. *Terms of Reference*—The Committee was asked to draw up a proper scheme for the introduction of physical education in primary and secondary schools with special reference to the following terms of reference :—

(1) To suggest measures for the improvement and development of physical education in the presidency, e.g.—

(a) the appointment of a number of trained experts throughout the presidency ;

(b) to build up a cadre of trained teachers, both for primary and secondary schools ;

(c) the provision of equipment, reference books and syllabuses for primary and secondary schools ;

(d) encouragement and help to local gymnasia and athletic associations.

(2) To draw up an actual scheme of Physical Education for primary and secondary schools of this Presidency with particular reference to the following points—

(a) the type of physical education required for children of different ages ;

(b) how far it is practicable to introduce compulsion ;

(c) to make recommendation with regard to the provision of playing fields in municipal and rural areas ;

(d) the probable cost to Government on such a scheme.

(3) To advise Government as to how a beginning should be made on the lines of their schemes with the sum of Rs. 10,000 provided for the purpose, in the current year's budget under 37-Education F. Government Secondary Schools.

The Committee was required to submit its report within one month of its first sitting.

3. *The Work of the Committee*—A press-note was issued by Government on 28th September 1937 informing the public of the appointment of the Physical Education Committee and requesting those interested in the problem of Physical Education to send in their suggestions to the Secretary. In response to this invitation the Committee received schemes and detailed suggestions from about forty individuals and associations interested in and intimately connected with physical education work. In addition to this, at the suggestions of the Chairman and other members of the Committee, letters were addressed to about twenty-five persons, heads of high schools, administrative officers of school boards of municipalities and district local boards, and managers of physical education institutions, and it is gratifying to note that the Committee received on the whole, a good response.

A list of persons and institutions that helped the work of the Committee by sending in their suggestions, is given in Appendix 4. The Committee records its gratitude to the persons and institutions who thus helped its work.

The Committee held in all four sittings ; the first on 23rd September lasted for a day, when Swami Kuvalayananda was unanimously elected the Chairman of the Committee ; the second on 20th November lasted for three days and the third on 17th December, discussed the draft Report and the last on 21st December adopted the Report for submission to Government.

According to Resolution No. 5310 above referred to, the report was to be submitted to Government, within a month of the first sitting of the Committee, but at the request of the Committee, Government were pleased to extend the period first to 15th December and later again to 22nd December.

. In submitting our Report, we have tried to avoid so far as possible repeating those sections of the Report of the Physical Education Committee of 1927-29, which are descriptive in character and we have also tried to be as brief as possible. The present Report has mainly two sections, (1) the Committee's recommendations and (2) the scientific and statistical considerations which should guide Government in launching a scheme of physical education. While the former gives in a nutshell what administrative measures are immediately necessary, the latter describes briefly the why and wherefore of these measures.

Regarding the sum of Rs. 10,000 mentioned in the third part of the terms of reference, the Committee would draw the attention of Government to paragraph 14 in Committee's recommendations referring to short-term courses for secondary and primary teachers and the Committee would suggest that this sum *minus* that which has already been spent on Committee's expenses be utilized for starting the short-term courses for primary schools and for conducting a two-months' course with about 100 secondary teachers, in February and March, in a centre selected by Government. The experience gained in these two months will be valuable in running the continued short courses later from September 1938 to May 1939.

It is also suggested that any balance left over be used for educative propaganda and for supplying a set of posture charts (six) to all primary and secondary schools.

## CHAPTER II

### Government's Efforts to Advance Physical Education in Primary and Secondary Schools (1900 to 1937)

4. The inclusion of physical education as a regular subject in the curriculum has only been a question of practical politics, even in Europe and America, since 1900. But the health of school children and importance of maintaining an equilibrium between the three aspects of education, mental, moral and physical, has ever been before the educationalists of the Province. That the officials of the Department of Public Instruction were alive to the importance of the old adage "Mens Sana in Corpore Sano" can be seen from the following description of a Secondary School quoted in the Quinquennial Report of the Director of Public Instruction for the Years 1907-12 :—

"Here are seated 30 or 40 boys on backless benches without writing-desks. Each boy has on his knee an enormous pile of books, which he grips with his hands and he huddles himself against them for support, when not writing. The room may be large enough to afford each boy the requisite number of cubic feet of air, but it is close, on account of the surrounding buildings, even in cold weather, and noisy, through traffic on the streets. You look at the little new scholar with bright, eager eyes and straight, plump, little body, and turn to the boys who have spent six long dreary years in this school. Can it be a matter for surprise that you see lolling forms, round shoulders, narrow chests, and vacant lustreless eyes?"

In the Quinquennial Report for 1912-17, appear the following remarks :—

"Games which have begun to receive attention in an ever-increasing measure, both from the teachers and the taught, have also their reflective action on the discipline and behaviour of boys."

The same Report goes on to describe the scout-system inaugurated in the Sardar High School, Belgaum, and the Karwar High School, and the house system introduced at the N. J. High School, Karachi, both of which gave a great fillip to the interest of boys in games. In short, a perusal of the Quinquennial Reports between the years 1907 and 1917 shows very clearly that physical education, as far as games, posture in the class-room, and the teaching of hygiene were concerned, was not lost sight of by the Education Department. In Government schools full provision was made for games, while furniture and equipment was, during these years, improved with a view to bettering the physical condition of the pupils in schools. But physical education proper did not exist: There was a drill of a sort and in those schools which had a head master and assistant masters who were themselves sportsmen, full opportunity was given to every boy, at least in secondary schools, to play games. A large number of head masters and schools managers, however, did not consider games to be of any importance with the result that the picture such as that described in the beginning of this chapter, represents the average secondary school in the first decade of this century.

In 1913, Mr. Wren was placed on special duty for a period of two months, for the purpose of holding classes of instruction for teachers in the methods of teaching physical culture. Mr. Wren had special qualifications in physical culture, and his class was attended by 27 teachers from Government high schools, 7 inspecting officers and 4 teachers from aided schools. Previous to this, in every Government high school there was appointed a drill and gymnasium teacher and reasonable expenditure on the salary of the drill and gymnasium teacher in aided schools was admitted for grant-in-aid. Scouting and games increased in popularity during the years 1917-1922. A number of camps were held for training scouts and scout-masters. This training included physical exercises, and it is to be noted that the majority of those attending these classes were school masters. In 1924, Government first gave a grant to the Boy Scouts Association, through the Department, largely on account of the valuable work done by this organization in the matter of physical education. Later, a grant was given also to the Girl Guides Association.

In 1925, Mr. Weber of the Y. M. C. A. was appointed Director of Physical Education. In the beginning he confined his attention chiefly to Bombay City, but classes for mofussil teachers were also held. In the following years he toured through Gujarat and Sind and gave an impetus to physical education by conducting courses of physical training and mass drill in some of the larger centres. Eight classes attended by 250 teachers were held in Bombay for a duration varying from a fortnight to six weeks. The system advocated by Mr. Weber was taken up in Government secondary schools and given considerable publicity. In June 1927, Mr. Weber was succeeded by Dr. Noehren as Director of Physical Education, but owing to financial stringency his contract was terminated in 1928. In the same year, i.e. in 1927, Government had appointed a committee on physical education which eventually published its report in 1929, the recommendations of which could not be carried out on account of lack of funds. Meantime in spite of the inability of Government and the Education Department to do anything definite to assist physical education, the popularity of games and gymnastics increased considerably, and the boy-scout and girl-guide movements played no small part in fostering this popularity.

During the course of the next five years, a revised physical education syllabus, based on the Board of Education (England) Syllabus, was introduced into the Primary Training Colleges.

The Divisional Inspectors in B. D. and C. D. and the Inspector of European Schools have at different times secured the services of physical training experts for the purpose of giving short courses to teachers—both men and women—from Primary and Secondary schools.

In the revised syllabus much stress was also laid upon the importance of hygiene in health education, so that teachers going out into the districts might be able to make their hygiene lessons practical. Similarly it was hoped that by paying more attention to physical education proper in the Primary Training Colleges, the Department

would be indirectly helping the progress of physical education in the primary schools. For it was realised that although the position in the secondary schools was far from satisfactory, yet the plight of the primary schools in the matter of physical education was disastrous from the point of view of the health of the Nation, particularly in view of the increasing number of children attending primary schools.

Inspecting officers, moreover, under instructions from the Department have done their best to encourage physical activities in all schools ; nor have they been altogether unsuccessful. Lack of money, however, and lack of trained teachers have seriously handicapped their endeavours.



## CHAPTER III

## Committee's Recommendations

5. Although the Report of the Physical Training Committee appointed by the Government of Bombay (1927-29) was still-born and remained buried in a Secretariat pigeonhole, the discussions and deliberations held while the Committee was in session, appear to have had considerable effect on the outlook of school managers, in respect of the aims of physical education in Primary and Secondary schools and the efforts made by them to reach these aims. The change was probably accelerated also by the discussions in the University Senate regarding the importance of introducing Physical Training in colleges as also by the growth of the U. T. C. and scout movements. It is now generally agreed that physical education is not complete if it stops short at muscular development, that bodily vigour is only a stage in the educative process which can be regarded as complete only when it results in mental vigour. Fatigue-producing exercises and acrobatic feats are to a great extent replaced by games, camping, out-door work and formal exercises which give a tone both to the mind and the body. The suggestions of the London Board of Education incorporated in "The Syllabus for Physical Training in Schools", have been largely adopted in all Primary Training Colleges and have from there percolated to all Primary schools which have trained teachers on their staffs. Cricket, hockey, football, volleyball and hututu have been the favourite games in all secondary schools. If the school managers' efforts are still much below our expectations, it is not because the will or knowledge is wanting, but because the schools can ill-afford to spend the requisite amount on acquiring and maintaining playgrounds or securing and paying for the services of teachers qualified to take charge of and guide this section of school activities. The secondary school budgets are as a rule inelastic, leaving little room for reappropriation. In most schools, school-fees and a part of the grant-in-aid are consumed by teachers' salaries and the rest of the grant-in-aid is spent on general equipment. Not a small number of schools are again receiving no grant-in-aid and they have ever to face the problem of balancing the annual budget. Under these circumstances, it will be nearly impossible for schools to give effect to the Committee's recommendations unless the schools are able to improve the income-side of their budget substantially.

6. *Full Grant-in-aid for Physical Education*—The view was, therefore, expressed, and the committee endorsed it, that Government should promise to meet fully the statutory responsibilities for grant-in-aid both on recurring and non-recurring expenditure for physical education in primary and secondary schools. Even when a school or a local body is not receiving the full quota of the ordinary grant-in-aid, Government should agree to pay 25 per cent. of the reasonable expenditure on physical education incurred by a secondary school and 50 per cent. to 66 per cent. of that incurred by the municipalities and local boards. It was

further agreed that reasonable expenditure on the medical inspection of school children, scouting and camping should be considered to be as legitimate a part of the expenditure on physical education as purchase of kit and apparatus, up-keep of playground and teachers' allowances. The Committee is conscious of the fact that in thus recommending to Government that they should promise the full share of grant-in-aid due on physical education, the secondary schools particularly are expected to spend Rs. 3 for every rupee earned from Government ; but the Committee is very hopeful that with this incentive from Government, the schools will be able to find the amount necessary for the purpose by making a special levy if that be necessary.

In this connection it was pointed out that a large part of the game-fees at present collected by schools is consumed in maintaining the senior and junior cricket teams and in meeting the expenditure on cricket matches. While realising the importance of cricket and the fact that a well-played cricket match is a great attraction to all the pupils of a school, the Committee would regard this expenditure—at least the major part of it—as not reasonable expenditure for grant-in-aid under physical education, recommended in the above paragraph. Such activities should be supported by those few who participate in them. For a similar reason, the Committee would regard expenditure on expensive games like tennis as non-admissible for grant-in-aid.

7. *Supply of Play-grounds*—Again the Committee would impress on Government the urgency of providing each primary and secondary school with a big enough playground. It is true that in Bombay City the problem is nearly insoluble and in places like Ahmedabad and Poona it is bristling with difficulties. But in most other places, small towns and big villages, it should not be difficult for Government and local bodies to make a free gift of vast playgrounds to the local schools or, if a free gift be not possible, to allow their use on a nominal rent. At any rate, an organized effort in this direction should be regarded by Government as their immediate responsibility. The Committee's recommendation in this respect will be: "Where suitable land is available Government and local bodies should either make a free gift of it to the local schools or at least permit its use for a nominal rent. Where such land is not available, suitable plots should be acquired by Government for schools on a grant-in-aid basis. And to solve the problem in big cities Government should press the respective municipalities to allow schools the use of such open spaces as they can spare and to make adequate provision for more open spaces in their town-planning schemes.

8. *Physical Education, a Compulsory Subject*—Our schools—both primary and secondary—have been primarily designed for classroom-work, physical education and outdoor work being regarded as extramural activities. It is most essential to bring about an immediate change in this outlook and, in order to secure this end, it is essential that Government should lay down that physical education shall hereafter be a compulsory subject, shall have the same status as the mother-tongue, history or mathematics, and shall have at least five periods per week devoted

to it, not necessarily in continuation of the periods given to other subjects. The minimum tuition period per day should, therefore, be laid down as five hours instead of four, at least forty-five minutes of it per day being given to physical education.

9. *The Two-fold Problem*—In making this recommendation the Committee is fully aware of the difficulties that will be experienced, at least in the beginning, in securing an adequate number of qualified teachers. The physical education periods must be all from 4 to 6 p.m. or 7 to 9 a.m., and if at all the pupils in a school are to be engaged simultaneously in this two hours' interval, it is most essential that the majority of the class-room teachers should also be physical instructors. The problem of supplying qualified teachers is, therefore, two-fold. Firstly, the school must have the services of one or more specialists, who have mastered the theory as well as practice of physical education, who can study the local problems and devise suitable schemes to meet local needs, and who will command in the school sufficient influence to secure the fullest co-operation of their colleagues. Secondly, every teacher in the school must be games-minded, and be able to control the classes on the playground as well as in the class-room.

10. *Physical Training Institute*—For this two-fold problem the Committee recommends a two-fold solution. Firstly, it recommends the institution (from June 1938) of a Training Institute for Physical Education, modelled on the lines of the Y. M. C. A. College of Physical Education at Madras. Admission to this institute shall be open to graduates—whether they are or are not working as teachers—and the course will extend to about nine months, from June to March, the examination being held in April. The course of studies will contain among other subjects,

1. Psychology and principles of physical education ;
2. Material and methods of physical education ;
3. Elementary knowledge of human body and principles of hygiene ;
4. Principles of physical examination and first aid ;
5. Elements of sociology and the importance of healthful life ;
6. Physical activities, conduct of games and organisation of physical education in schools ;
7. Camping and scouting ;
8. Mother-craft and infant-care (for women students).

The tuition at this Training Institute shall be free, and about 10 per cent. of the students under training should receive stipends. When enlisting students for this Institute, half the number of places may be given to women applicants, the total number of admissions being 100.

The staff of this Institute should consist of five members, and the majority view is that the Principal should be a member of B. E. S. Class I and two of his assistants should be of B. E. S. Class II. Two of the five posts should preferably be filled by qualified women teachers. It is further suggested that the Principal's post be filled by an Indian with the required qualifications.

11. *A College of Physical Education*—If physical education, however, is to develop as a science, and if corrective and remedial work which should legitimately form a part of physical education, is to be organized satisfactorily, the direction of it must be in the hands of persons who have a better grounding in the theory of physical education than can be imparted in the Training Institute proposed above, and who possess a sound knowledge of the sciences on which are based the laws of physical and mental growth, along with the theory of education in general. As this course cannot possibly be completed in one year, it seems desirable that Government should investigate the possibility of establishing at an early date, such a college also in this province. The college should be on a par with the College of Engineering, with a three years' course after passing the Intermediate Examination in Science.

12. *Inspectors for Physical Activities of Schools*—At the end of three years, the Physical Training Institute will have turned out 300 teachers—men and women. Some of them will have been taken up by Government as District Instructors and others will have been absorbed by the high schools, and the primary training colleges. By that time, again, it is expected that the high schools which have no playgrounds at present will have been provided with suitable playgrounds. The diploma-holders of the Physical Training Institute, attached to the Primary Training Colleges will have trained a number of primary teachers, and there will thus be skilled instructors of the right type working all over the province and the time will have arrived to create an agency for inspecting and directing their work. The Committee expects the staff of the Training Institute—if the Institute ceases to function in 1941—and the district instructors referred to in a later paragraph (14B) to take up this work, the Principal and his assistants being appointed respectively as the Chief Inspector and Divisional Inspectors of Physical Education.

13. *Every Teacher a Physical Instructor*—It is said above that the problem of supplying physical instructors to schools is two-fold. Firstly, the schools need the services of specialist teachers of physical education and the Training Institute recommended above will adequately meet the need. Secondly, it is necessary to make each teacher games-minded, so that he will attend the playground and engage his class in physical activities under the guidance of the specialist teacher. A generation hence the problem will have automatically disappeared as the teachers then will have had the benefit of the physical education organization now contemplated. But something must be done to give the necessary bias to the teachers already engaged by the schools; for, if that is not done, a serious defect will have crept into the organization.

14-A. *Short-Term Courses*—It is, therefore, proposed that concurrent with the Training Institute, continuous short-term courses should be instituted at one place (or at different places at different times of the year, if that be preferred) where about 200 teachers below the age of 35, from different secondary schools and training colleges, will live under canvas and be given courses in P. T., running, hiking, swimming, climbing, jumping, air-gun practice, marksmanship and observation, for about two months. At the end of this period another batch of 200 teachers will come and have the same training for the same period. Omitting the two months of heavy rains—July and August—it will be possible to have five such batches trained in a year and in three years practically all the secondary school teachers under 35, will have had this training. It is contemplated that the teachers called for this short-course will be paid by Government their travelling expenses to the camp and back, and will have free messing at the camp.

14-B. *Itinerent Instructors*—The Committee would not recommend this kind of short course for the primary school teachers. Owing to the smallness of the staff of an average primary school the drafting of primary school-masters for a period of two months would dislocate the school-work more than it would in the case of secondary schools. It is, therefore, proposed that four instructors should have the charge of rural areas and move about in the four divisions holding a fortnight's class for primary teachers in suitable places. They will teach the teachers in rural schools to choose the games best suited to the varying ages and physique of children and the work needs more the knowledge of child-mind than hardihood on the part of the teacher. For urban areas, particularly the district towns, the Committee would recommend the appointment of one or more instructors for each district, who will conduct short-term (six months) classes for the teachers in the primary schools in those towns, the teachers continuing to work in their respective schools and attending P. T. classes in the morning and evening.

15. *Malnutrition of Children, and Street Hawkers of Eatables*—The problem of malnutrition of children though allied to the problem under discussion, is in the opinion of the Committee more a problem for the economic and medical advisers of Government. For while there are at one end children who need food more than exercise, at the other end there are children who are over nourished or ill-nourished. While in the first case the solution lies in improving the economic condition of parents, in the case of others the parents need to be taught what is good nourishment for their children. And neither of these functions can be carried out well by a school. The Standing Committee recommended hereafter (para. 17) may be better able to suggest measures to avoid the ill-effects of malnutrition. This is discussed in fuller details in paragraph 37. There is, however, a minor but important aspect of this problem to which the Committee would draw the attention of Government. A number of school children particularly in big cities purchase eatables from the street hawkers and, more often than not, these are things injurious to the health of children. It is unanimously accepted that the street hawker near a school is a public enemy, but the heads of schools have found it hard to get rid of him.

Neither the police nor the municipality appear to have the authority to drive him out of the place and the Committee would press for legislation in this matter, making it impossible for a hawker to sit near or move about a school while the school is in session. The Committee is aware that that does not solve the whole problem and that the hawkers may rent house fronts and plant themselves there like the Pan-sellers; further legislation licensing the sale of eatables, near a school house, may then be necessary. But preventing the approach of hawkers to the street where a school is situated, during school hours, will be an important first step in the direction.

16. *The Wider Problem*—At least at present for every child of school-going age attending school, two are kept outside and even when the former are well provided for in respect of physical education, the problem will be solved only 33 per cent. We cannot afford to wait till all children of school-going age are brought to school and even when this consummation is reached there will still remain a large number of children between the ages of 11 and 18—the age best suited for physical development for whom no schooling is provided under the Compulsory Education Act, at present. The problem of the physical education of these children is perhaps, under a narrow interpretation of the terms of reference, outside the purview of the Committee; but the problem is so important that the Committee cannot afford to ignore it altogether.

17. *Standing Advisory Committee*—It is, therefore, recommended that Government should appoint a statutory standing committee to advise the Minister of Education on all matters of physical education connected with school-going children as well as others. The committee should consist of:—

- (a) The Director of Public Instruction;
- (b) The Director of Public Health;
- (c) The Principal of Training Institute (or Chief Inspector of Physical Education); and
- (d) Six non-official members, nominated by Government, at least one of whom shall be a qualified medical man and one shall be a lady.

The chairman will be nominated by Government from among the non-official members.

It is expected that the Committee will meet at least once in three months and take a periodical review of the physical education activities in the province and suggest measures of improvement. It is further expected that the chairman of the committee will be the propaganda officer who, with the help of the chief inspector of physical education, will organise lectures and displays, physical education weeks and camps in which school children as well as others will participate, broadcast leaflets, arrange for radio talks and cinema films influencing public opinion in this matter, and undertake the publication of handbooks for the detailed guidance of physical instructors working in schools.

18. *Private Gymnasias affiliating athletic bodies, etc.*—Private gymnasia both of the old Akhada type as well as the new ones, or a combination of both, are national assets and every possible help should be extended to them. But it is not easy to assign them a place in the organization of physical activities in schools, contemplated above. The old Akhadas are, in their very conception, meant to create gymnasts and very few schools look to them now for guidance. The new ones have done much to popularise physical activities, but once the schools organise their physical education departments, they may lose their importance unless they are in a position to take up the work of teacher training. The statutory standing committee recommended above will be better qualified to deal with this problem when definite proposals are made by the gymnasia or mandals, as to what share they would take in the general organization of physical education as contemplated by the standing committee.

Affiliating athletic bodies and leagues like the Akhil Maharashtra Sharirik Shikshana Mandal and Gujarat Vyayam Pracharak Mandal have been doing good work in standardising games and sports. The standing committee should find out how such organisations could be best utilised to further the cause of physical education in the province.

Scouting with its opportunities of training in character and service and with the stress laid on camping and out-door activities is, if carried on right lines, a useful adjunct to physical education. Encouragement should be given to the scout movement in schools.

18-A. *Medical Inspection*—The Committee recognises the importance of medical inspection of school-going children and it has in an earlier paragraph (6) recommended that all reasonable expenditure incurred by schools and local bodies on medical inspection of school children be recognised for grant-in-aid. As the schools and local bodies can secure honorary services of local doctors and members of the medical associations, the Committee thinks that this will be a better arrangement, at least in the beginning, than creating a special Government department for it which will be necessary if Government themselves undertake the work of medical examination of school children. It is, however, necessary to collect all the data of the medical examinations conducted in different schools and base on the data thus collected, occasional reports which would reflect the improvement brought about in the physique of school children, by the physical education organisation proposed by the Committee.

19. *School-Timings*—So far the Committee is unanimous in its recommendations except in the matter of the salaries and the status of the teachers in the Physical Training Institute. Another item on which the opinion is divided is in respect of school-timing. A large volume of vocal public opinion has been demanding that schools be held twice a day, 7-30 to 10-30 a.m. and 2-30 to 5-30 p.m., with slight seasonal variations. But the opinion of those who are working in schools appear to be indecisive. Those who favour the change emphasise particularly the harm done to children by starting intellectual work immediately after a full meal. Those who object to the change emphasise particularly

the impracticability of the measure so long as social customs do not change. This particularly applies to big cities where the Government and other offices start work at 11 a.m. or about that time and 10 a.m. is the time for the midday meal. In smaller towns and villages the conditions are different but the public there like to imitate the customs prevailing in cities. The majority of the Committee would like the schools to adopt this change and Government may also help the change by changing the office hours wherever possible.

20. *The Syllabus*—The syllabus attached to this Report is intended to serve as a guide. It may later be suitably modified in view of actual experience gained by the teachers of physical education when they begin work in different schools. The Committee would, however, emphasise the need of using Hindi when giving commands in P. T. exercises.

20-A. *Cost of the Scheme*—It is expected that when the physical education scheme outlined in Committee's proposals is in full swing, the expenses of secondary schools will go up by about 10 per cent. and in primary schools by about 5 per cent. ; or each child in a secondary school will cost about Rs. 6 more and a child in the primary school will cost about Re. 1 more than now. The Government's share will thus be about Rs. 1-8-0 per child, per year, in a secondary school and about annas 9 per child per year in a primary school, and roughly the cost to Government will go up by Rs. 1,20,000 for secondary schools and Rs. 6,00,000 for primary schools. Supposing this full measure is reached in six years, an optimistic supposition, the cost to Government in the first year, for grants on recurring expenditure, will be Rs. 1,20,000. If we add to this, the cost of securing playgrounds, Rs. 25,000, the cost of the Training Institute for the first year, Rs. 25,000, the secondary teachers short-term courses Rs. 74,000, and the cost of maintaining the four instructors for the primary schools in rural areas Rs. 10,000, the expenditure for the first year need not be more than Rs. 2,54,000. It will rise in the next two years when more schools develop their physical education departments and when the district instructors' appointments are made, but in the fourth year it would remain where it is, as the short-term courses for secondary teachers will then be discontinued.

21. *The Location of the Training Institute*—There was some discussion about the location of the Training Institute and the Committee came to the conclusion that Poona would be the best place for the purpose as it is desirable to work the Institute from June to April which is the academic year at present. Bombay, Ahmedabad and Belgaum were the alternatives suggested, but Bombay and Belgaum were ruled out on account of the heavy monsoon showers in these places in June to August, and Ahmedabad on account of its excessive heat in summer. In choosing Poona, the Committee further hoped that Government might find it possible to allow the Physical Training Institute to be located in the Deccan College premises for three years, thus saving the capital expenditure that would otherwise be necessary for lecture-rooms, playing fields and hostel accommodation of the teachers under training.



## CHAPTER IV

## The Ideal of Physical Education and the Different Aspects of the Scheme

22. *The Ideal*—The ideal of physical education is not merely to build up a powerful and healthy body, but also to evoke and foster those personal and civic virtues in pupils which would make them better citizens whether they choose to be civilians or soldiers in their after-life. Leaders of physical education all over the world now recognise the closest association of the body and mind, and have come to the conclusion that the education of one cannot be divorced from the education of the other. Hence as remarked by Marshall and Rees, "Physical education is but one aspect of the larger problem of education in general, and any system which divorces, or tends to divorce, the physical from the moral and intellectual aspects of life, is thoroughly unsound" (4).<sup>\*</sup> This very principle was emphasised by E. Major, Warden of the Carnegie Physical Training College, Leeds, when at the last Olympic gathering he declared, "We need to aim higher than mere health, than vigorous games and teams, than strong muscles and profuse perspiration. No physical training can have any abiding value unless it contributes also to mental and moral education" (6). According to this ideal, therefore, physical education and intellectual education are complementary to each other and must be integrated in such a way as to form an organic whole. In formulating our recommendations, we have constantly kept this ideal before our eyes; and if Government accept and implement these recommendations immediately, our province will have soon added to its stature, not only physically but also morally and intellectually.

Having thus enunciated our ideal of physical education, we may proceed to explain the different aspects of our scheme of physical education. It is intended for the pupils of the primary and secondary schools, and must be explained in its application to the pupils of ages between 6 and 18, in its psychological, anatomical, physiological, educational and national aspects.

23. *The Psychological Aspect*—Any course of physical education to be psychologically sound must satisfy the following conditions:—  
1. It must harmonize with the psychological growth of the pupils and must not run counter to it. 2. It must be comprehensive. 3. It must be progressive. 4. It must be attractive. 5. It must have an carry-over value, that is, it must develop those qualities which tend to make an ideal citizen.

Many psychological "ages of man" have been differentiated, and all such classification schemes have advantages and disadvantages. The following one is only submitted to illustrate the main principle and to serve as a test for establishing the soundness of the syllabus recommended here for physical education. These psychological ages may be divided into four parts so far as our work is concerned. They are

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<sup>\*</sup>Bracketed figures indicate reference books given in Appendix No. 3.

6 to 8, 9 to 12, 13 and 14, and 15 to 18. Each of these is characterized by particular psychological tendencies and in any scheme of physical education scientifically developed, the physical activities prescribed must harmonize with these tendencies. The following study of these ages will show that the exercises recommended are merely the physical expressions of the psychological urges felt by the pupils in their school days, and that their play life is in complete agreement with their ages.

6-8.—“Young animal calling for games satisfying individual urges” (1). “Children of this age have an irresistible desire to imitate or dramatize. They prance like horses, fly like birds, howl like the wind, and sway like the trees, just for the joy of activity and make-believe. They like to dramatize all the familiar activities of the life in which they live, and act out in play all the details of house-keeping, farming, keeping a shop, constructing buildings, going hunting, etc., with special interest in certain types of activity, such as imitating moving trains, soldiers on the march, the circus, festivals and parades” (10). Children in this period of their life instinctively enjoy free movements such as running, jumping, hopping, vaulting, etc.

From the general plan of physical activities given in the next chapter and from the particulars given in Appendix No. 1, it will be seen that we have recommended for pupils of this age group free play, simple imitation, story play and dramatization with games of low organization, all in keeping with the psychological needs of this age.

9-12.—Pupils continue to show the tendencies of the previous group, but about the age of 11 they begin to be fond of such exercises as require grace and lightness. During this period they have an instinctive partiality for physical activities in which rhythmic movement is prominent and which allow the attainment of individual excellence. At 12, the gang instinct and the combative spirit are just beginning to sway the young minds.

In the exercises recommended for this age group, imitation and dramatization continue up to a particular limit. Wand-drill, Dumbbells, Club-swinging and Lezim all to be done in a mass and to the accompaniment of music, are well known for grace, lightness and rhythm. All of them afford ample opportunities for exhibiting individual skill. To satisfy the faint impulses of the combative spirit, Lakdi which prepares the boy for fencing and Lathi-fight has been recommended. In order to give scope to the gang instinct, games of slightly advanced organization have been prescribed.

13 and 14. *Age of Puberty*—The gang or gregarious instinct becomes prominent and asks for organized team sports. Sex consciousness develops and the boy is more combative and likes to throw straight and strike hard. The girl in her growth at this period psychologically needs more exercises for the abdominal and pelvic organs and muscles.

In order to satisfy the gregarious instinct we have recommended team games. We lay special stress on the play of football because not only is it a highly organized game, but it develops the combative spirit healthily. Fari-gadaga and Lathi afford opportunities to strike hard

and Viti-Dandu to throw straight and to strike hard as well. For girls we have recommended Asanas which provide very good exercises for the abdominal and pelvic parts.

15-18. "In growing up psychologically, we carry within ourselves the beings we were" (1). Thus this age group shows psychological tendencies which marked the previous age groups in general and the last age group in particular. Boys become anxious to learn the art of self-defence and are eager to enter into alliances.

Hence exercises recommended for this age group are advanced stages of those recommended for the last group. Fencing and Lathi-fight give a good grounding to pupils in the art of self-defence. Organized games and camp-life that we have recommended for this group, afford ample opportunities to the boys for forming all sorts of alliances.

This rapid survey of the psychological ages of pupils and the physical activities recommended for each age, will show that the course of physical education we have chalked out harmonizes with the psychological growth of the children for whom it is intended.

The course is also comprehensive, progressive and attractive. It takes into consideration the various psychological types to be met with amongst the school children. There are organised games and individual games. There are team tests and individual tests. There are rhythmic exercises and combative exercises. There is musical calisthenics and calisthenics without music. There are exercises with apparatus and without apparatus. There is free play and there are various kinds of drills. There are sports and there is also the rigid military training. A glance at the contents of Appendix No. 1, will show how the physical education programme progresses from simple to complex and from complex to still more complex. Such a comprehensive and progressive programme is bound to be attractive also.

24. *Anatomical and Physiological Aspects*—Broadly speaking, anatomically a programme of physical education should be capable of securing not only well developed bones and muscles but also a stable and active nervous system. Physiologically it must establish harmonious functioning of all the systems working in the human organism, so as to give that organism the best of health and organic vigour. The programme must also bring about efficient and effective muscle action and must take into account the different needs of the two sexes.

The key to anatomical growth lies in muscle development, because it is under the influence of muscles that bones grow in length and strength. As stated in Gray's Anatomy "many of the periosteal vessels reach the periosteum through the attachment of the muscles, so that when the latter are well developed and their blood supply abundant, the periosteum is also well supplied with blood and the bones are strongly developed" (15). So if we could have the bones to be long and powerful, so as to develop good stature, we must concentrate upon muscle building exercises. In the course recommended, however, these exercises are avoided in the earlier part of pupils' school life, as it is not natural to the children to submit

to formal exercises. These exercises first appear at the age of nine, and are light enough up to the age of 13, when puberty sets in and there is a sudden rise in the stock of blood. The volume of the heart begins to improve till during adolescence it increases twelve-fold (14) and (37). Hence it is desirable that strenuous muscular work should start at 13 and should progressively increase during the remaining school life. On the basis of these anatomical facts, heavy muscular work in the form of Dandas, Baithakas, Namaskaras, is recommended to begin at the age of 13, and to continue into the years of adolescence. It may be pointed out here that the development of muscles does not solely depend upon the muscular exercises exclusively devised for that purpose, but every physical activity on the play ground or elsewhere, tends to exercise muscles and tones them up. The vast number of games, sports, combative exercises, individual and team tests, balance exercises, drills, etc., are capable of developing not only individual muscles or muscle groups, but are also calculated to bring about their co-ordinated and efficient action which is everywhere needed in daily life.

This plan of exercises will also secure a stable and active nervous system. All spinal movements required for the varied activities of the physical education programme and especially for the Asanas, will systematically develop the spinal cord and spinal nerves. As regards the brain, the most important and vital part of the nervous system, it practically ceases growth in weight at the age of 10 (4), and its further progress lies along the path of structural development. All neuro-muscular co-ordinations depending upon finer adjustments such as are required in exercises of skill, tend to help the structural developments of the brain. Wrestling which demands quick neuro-muscular co-ordination of a large number of muscular groups, football which calls forth the neuro-muscular adjustments and co-ordinations of the different muscle groups of the lower extremities, highly developed practices of club-swinging which call for the co-operation not only of the big muscular groups but also the finer adjustment of smaller muscles if the performance is to be graceful, Fencing and Farigadaga, success in which depends upon the finest adjustment of the tiniest muscles of the eye, all promote the structural growth of the brain. The result is that the whole nervous system is ready to give a quick response to whatever call is made upon it.

The rhythmic exercises no doubt do contribute to the stability of the nervous system. But stability is best attained through combative exercises and team games. All emotions such as anger and unhealthy rivalry, must be kept under control, the strongest will power must be brought into play, and the brain must be kept cool under the worst of provocations, if the game is to be won. These habits cultivated during combats and on the play-ground sink deep into the blood, and build up a steady nervous system which keeps cool under the most trying circumstances in after-life.

25. *The physiological aspect* of physical education should secure for the pupils the highest organic vigour and harmonious functioning of the bodily systems. When it is remembered that the fountain-head of organic energy is the nervous system, it is easily seen that the plan of physical education recommended, has made ample provision for promoting

this organic vigour and so far as the functional harmony goes a well developed nervous and muscular system will ensure the same.

We purposely avoid any discussion about the endocrine glands here.

A general survey of the scheme will show that considerable attention is given to gymnastics. This is in accordance with the findings of the Committee on Physical Education appointed in 1935 by the British Medical Council :—

“ The Committee regards gymnastic exercises as an essential and fundamental part of physical education. Such exercises have a number of important advantages over field games ; they can be arranged in a sequence of progressively increasing difficulty, they can be adapted to the needs of persons of different ages and conditions, they can produce the balanced development which is the true aim of physical education, and they can be performed by large numbers of individuals in a relatively restricted space.” (19).

While discussing the question of gymnastics, it may be useful to point out that undue development of skeletal muscles must be studiously avoided. Because, as R. T. McKenzie says, “ When muscles are over developed they become parasites on the vitality, which is sapped in the struggle to provide for their nourishment ” (14).

26. *The Sex Aspect*—“ There are some fundamental differences between the body of the boy and that of the girl which determine the kind and extent of the activity to be followed. In the first place, the skeletal framework of the girl presents some important differences. The bones are lighter. The pelvis is broader, and that gives to the thigh bones a marked obliquity. The width of the pelvis interferes with the running ability of the girl ; in all movements of the lower extremities, either in walking or running, there is a lateral sway of the pelvis ; and the extent of this oscillation determines the speed of the individual in getting over the ground ” (16). Hence field and track events as also combative games, are excluded from the courses recommended for girls.

It is also desirable to exclude heavy muscular work, because as stated by J. Lindhard, “ the masculine form of muscular work, reacts on the skeleton, makes it firmer, more solid, more angular and more rough. That a development in this direction may be even very unfortunate for women is obvious. We need only think of the pelvis. As has already been stated the development within the civilized races tends more and more to produce children born with large heads. If this development is to continue, the female pelvis must also develop to greater and greater spaciousness, and more and more typically female form. This is not achieved by strong physical exercises, quite the reverse ” (17). However, as girls must have mild exercises for the culture of the abdomen and pelvis, the course recommends more attention on their part to Asanas and Pranayama along with other abdominal exercises given by E. Bjorksten.

The appalling maternal mortality which sweeps away 150,000 to 200,000 Indian mothers every year, will be largely diminished, if the abdominal and pelvic exercises recommended in the scheme are faithfully carried out (30), (34), (35).

There is one more consideration. As pointed out by J. Lindhard and E. Bjorksten, "the woman's nervous system is generally less stable than a man's and especially so in the vasomotor system. The woman's unstable nervous equilibrium makes her more sensitive to all emotions, and she is distracted from her work more easily than the man", (17) and (18).

With a view to stabilising the female nervous system it is recommended that in the case of girls, greater attention should be paid to those light exercises which are to be done to the accompaniment of music.

27. *The Postural Aspect*—In the (British) Board of Education's Syllabus we have the following remarks about posture:—

"The maintenance of good posture is one of the primary object of physical training, and one of the chief purposes of this book is to show how correct positions of the body in sitting and standing and in the ordinary occupation of daily life may be made habitual. The outward expression of the results of such training and the ultimate test by which every system of physical training should be judged, are to be found in the *posture and general carriage of the children*, not only during the gymnastic lesson but in the class-room and on the games field. If the class or the individual stands badly, there has certainly been some failure in the teaching; no teacher can be regarded as successful unless his pupils assume good bodily positions naturally and as a matter of course without evidence of strain or stiffness." (20).

In connection with the children of rural school, the same syllabus says,

"Their (rural school children) general carriage is often bad, their movements awkward and clumsy, for co-ordination is poor, and their general habit of mind may be somewhat unresponsive. The teaching, therefore, should be especially directed towards training a sense of good posture, to developing co-ordination and thus correcting clumsiness and encouraging lightness, agility and ease of movement, and to inculcating a sense of rhythm in movement." (20).

What is said above about the British rural schools very largely applies even to the urban schools in India. Majority of our school boys sit awkwardly, stand clumsily, walk badly and talk shyly. They feel uneasy if they find themselves in the company of strangers. All this can be avoided and corrected by a course of physical education, because "by exercise in the gymnasium, muscles are lengthened or shortened until the right balance is attained between opposing groups and good tone of the whole muscular system is ensured" (3), and this balanced muscular system automatically tends to develop good posture. Combative exercises will shake off shyness, and exercises requiring skill and rhythm will develop excellent co-ordination, adding grace to deportment. It may be pointed out here, however, that posture requires all this, and much more. Posture constitutes the very essence of that undefinable something which we call *personality*. Such a posture requires on the part of the teacher as much attention in the class room as on the play ground; and as much care on the part of the parents as on the part of the teachers.

Many of our pupils stand with a pelvic tilt, throwing the whole burden of their body upon one leg. Such a posture leads to anatomical defects and interferes with the blood circulation of the pelvic parts. But the school teacher perpetually walking on the intellectual plane, finds no time to look to these things of flesh and bone and the pupil in his blissful ignorance goes on developing this awkward bearing.

Far more serious, again, is the question of the spinal curve. K. A. Knudsen who has made a special study of the spine, while speaking at the Congress of Physical Education, held at Berlin in 1936, pointed out that 50 per cent. of the children were observed by him to have defective spine (7). Another great authority, Major Neumann Neurode, is of the opinion that 97 per cent. children develop curvature of the spine, (8). These observations mainly relate to children of the European countries. But we might easily infer from them similar conditions in India. Modern school life demands a lot of work and tempts pupils to lean over their desks. This leaning becomes more and more pronounced in the case of the pupils who begin to develop myopia which is so much in evidence now-a-days. A bad stoop is thus developed which becomes harmful to the health of the children, as it seriously interferes with their digestive and respiratory system.

The stoop maintained during the long and wearisome school hours everyday, compresses the digestive organs, impairs their blood circulation, damages their nerve supply and leads to dyspepsia, and constipation. How these "Diseases of Civilization" are eating into the very vitals of humanity, is described in the writings of Sir William Arbuthnot Lane and Dr. Kellog (22), (23) and (24).

The interference with the respiratory system is still more harmful. It leads to respiratory diseases and even to anaemia (2). Tuberculosis is considered and rightly considered to be the most dangerous of respiratory diseases. But, in Bombay, asthma, bronchitis and pneumonia take a toll of life that is five times heavier than that taken by tuberculosis.

Proper seating arrangements in the classrooms, as also speed and breathing exercises on the playground, will, indeed, help to improve the situation. But that is not enough. If we would save our children from the evil consequences of bad posture, the parents at home and the teachers in the school must teach them the importance of right posture. Playgrounds or no playgrounds, benches or no benches, desks or no desks, short sights or no short sights, we must teach our pupils to keep the spine erect and to hold the head high at all times.

28. *The Educational Aspect.*—The aim of physical education is to produce qualities like discipline, self-sacrifice, self-control, sportsmanship, courage, resourcefulness, presence of mind, endurance, will power, initiative, leadership, civic sense, national consciousness and patriotism, all leading to the development of a balanced mind so necessary for an ideal citizen of capacity and character.

The organized games and sports such as football, Atyapatya, Khokho, afford the best education in discipline, self-control, self-sacrifice and sportsmanship. In such games every member of the team has to obey the commands of the captain even if he thinks that the captain is wrong. This attitude of mind imperceptibly but definitely develops discipline. Again, every member must act with a spirit of sacrifice and subordinate his individual interest to the interest of the whole team.

Self-control and sportsmanship automatically develop as each member of the team has to keep his brain cool in the face of possible reverses and take the resulting defeat in a spirit of comradeship, if the team wishes to have further opportunities in the world of sport.

Mass-drills and military training are further helps to cultivate discipline and self-control. It is to be noted, however, that discipline and self-control, if they are to possess any carry-over values, must be the expression of spontaneous psychological development and not an outcome of a superior will imposed upon from outside. • We wish, therefore, discipline and self-control to be largely the result of sports and games rather than of drill and military training recommended in the course.

Courage, resourcefulness and presence of mind grow in combative tests, whether they are between two opposing groups or opposing individuals, as new situations arise and have to be instantaneously dealt with. If these combats are equally matched so as to make the issue doubtful, the interest aroused in the combatants is very keen and naturally calls forth the best exercise of courage, resourcefulness and presence of mind. Endurance which is physical and will power which is psychological, are so inter-dependent that they cannot grow singly. Will power will automatically develop when endurance is being cultivated. Personal combats such as boxing and wrestling, are the physical activities that best lead to endurance and will power. Hill climbing or rope climbing, field and track events are almost equally good. A combatant or a competing athlete tries to hold on even when his muscle is gone, his nerve is gone, his heart is gone and his lungs also are gone. This holding on when everything is gone, develops the qualities of endurance and will power.

Civic sense, a quality which every citizen must pre-eminently possess, can best be developed by organizing physical education weeks, etc., as shown in the next chapter.

Leadership and initiative stand on a different footing. They anticipate natural aptitude on a larger scale. Still, under a trained physical educationist, both leadership and initiative can be developed to a large extent. The beginning has to be made while the pupils are young, when they are more inventive, more impressionable and more responsive. The play-ground affords ample opportunities for cultivating these qualities if the children's inventive genius and natural urge to excel, are skilfully stimulated. Later on, camp life can advantageously be used for this purpose by introducing self-governing organizations amongst the students.

There are some people, however, who contend that the qualities developed by a course of physical education are useful only on the play-ground or in the gymnasium, and do not necessarily help the pupil when he is faced with the realities of life. The best reply to them would be to describe the origin of the different games and sports. Most of the old games and sports such as football, Atya-patya, Khokho, Viti-dandu,



are dramatizations of the actual events of life. As pointed out by Dr. J. B. Nash in his excellent lectures on "The Philosophy of Sports" delivered at the World Conference of Physical Education at Berlin in 1936, football is the game of Grecian origin. It was played between two city-states, "The game continued for many days, and victory achieved when one team kicked the ball *through the opponents' city gate*" (9). The terminology used in *Atya-patya*, *Khokho*, *Viti-dandu*, etc., is clear on this point. The party that wins the toss becomes the party of rulers (रुलर्स) and the other party becomes the ruled. When a player is out he is said to be "*dead or killed*" (मैला or मारला). In the play of *Viti-dandu*, the rulers disarm the ruled. The rulers have a right to use an instrument to throw their missile, but the ruled have none. They might only throw back the missile *with the hand*. The hill-fort of the rulers is called गली and they are deprived of their power to rule only if the missile hits this hill-fort. These illustrations are sufficient to show that the old sports are, as stated above, merely dramatizations of actual events of life; and were at one time, played not merely as a matter of fun or pastime, but to develop those qualities which would be useful in actual practical life of those times. What applies to old sports applies to new, and there cannot be the least doubt that physical education does teach physical activities which have definite carry-over values.

Physical training has been till now, in the hands of people who did not know the psychological background of the training or the trained. Now, if we want to give its rightful place to physical education as an integral part of the general educational scheme, we must have trained physical educationists. When that is done and when playgrounds and gymnasias are controlled by them, our schools will not fail to send out ideal citizens of capacity and character that we demand.

29. *The National Aspect*—Beyond making a simple reference, up to now we have not said anything about the two qualities, namely, national consciousness and patriotism because we wanted to treat them separately. We feel confident that our scheme, if it is properly worked out, is capable of fostering these qualities to any desirable extent. There are references at several places to music. We recommend that this music should be vocal to a very great extent, and should consist of patriotic songs, so that it will kindle the flame of patriotism in our children's hearts and will keep it burning brighter and brighter. If this is done and if the scheme is in the hands of competent physical educationists, we are sure, our scheme will do the same thing for India that the German system of gymnastics did for Germany or the Swedish system did for the Swedes in the last century.

The two systems of physical training best known in the West are the German and the Swedish. The German system was founded by Jahn in order "to unite the people of Germany into one nation, physically, intellectually and morally strong, against the threatening enemy of the West" (5). Napoleon defeated the German forces at Jena in 1806, and the Treaty of Tilsit in 1807 deprived Prussia of half of her territory.

This encroachment on his Fatherland aroused "Father Jahn" and he founded his system of physical training which helped Germany to be one of the foremost nations of the world. The Swedish system founded by Ling, had also its birth under similar circumstances. "The Swedes" had been suffering national losses on the south and east of the Baltic, due to the aggressions of France and Russia (5). It was to successfully withstand these aggressions that the Swedish system came into existence.

We want to make it clear, however, that our scheme is not at all intended to be a preparation for fight, even defensive. We know how childish it would be to think of defending one's country with Lathi, Farigadaga, air-guns and even with rifles, in the modern warfare. We are aiming at physical, mental, moral and spiritual gain; and we feel that our scheme is quite competent to secure those gains for our boys. It is eminently capable of fostering national consciousness and national pride.

Even when we have taken full advantage of the latest scientific thought of the West and liberally incorporated Western physical activities, our scheme has and must have a definitely national bias. According to Headley and Murray, the compilers of the official syllabuses in England were throughout confronted with the difficulty that they had no definitely English system of physical education upon which to base a system suitable for schools (3). We had fortunately at our disposal rich and ample material purely of Indian origin. When our youths trained under the scheme will gather together in thousands and tens of thousands for mass demonstrations, and when they will be successfully taking their part not only in the inter-provincial but also in inter-national contests, and win laurels there, their hearts are sure to be filled with national love and patriotism.

In 1906, the late Honourable Mr. Gokhale pointed out to an English audience the demoralizing effect of being disallowed the use of arms (31). It is in order to counteract this demoralization that we have recommended military training and rifle practice. The scheme is conceived with the idea of making our boys physically, mentally, morally and spiritually strong. Hence it tries to eliminate all those factors which tend to weaken the moral and spiritual fibre of our youth. India has already started assuming an erect posture on the strength of her moral and spiritual backbone. This scheme proposes to so strengthen that moral and spiritual backbone as would enable India to play her part honourably in the affairs of the world, and lead humanity to a state of universal brotherhood.

## CHAPTER V

## Courses of Physical Education

30. We have so far described our ideal of physical education and discussed the different aspects of our recommendations to Government. We now propose to give an outline of the courses for the primary and secondary schools, and for the Training Institutes for the teachers of physical education.

31. *Courses of Physical Education in Primary and Secondary Schools* :—

(1) *Physical Activities*—A general plan of physical activities is given at the end of this Chapter.

In this plan we have merely stated the categories of exercises. Each category includes a number of physical movements. The aim of the teacher should be to go from simple to complex and from complex to more complex. In the table of the plan we have indicated the ages at which particular activities should start. Details of exercises falling under each category have been given in Appendix No. I, A. Appendix No. I, B sets forth the exercises that are to be avoided by girls; and Appendix No. I, C lays down the standard of apparatus to be used. Exercises mentioned in Appendix No. I are meant for general class work. Pupils who would be declared medically unfit should be given corrective exercises, whereas those above the average should be allowed to undergo training in advanced courses of physical activities.

(2) *Out-door work*—Every opportunity for out-door work should be taken advantage of. Besides military training, this work should consist of hiking, climbing, jumping, etc. Educationally it should be correlated with the teaching of mathematics, history, geography (including map-reading) and hygiene (including sanitation).

(3) *Physical Education Days, Weeks and Months*—One day in a month and two weeks in a year should be observed as Physical Education Days and Weeks, when exclusive attention would be paid to physical education with a view to create interest and enthusiasm not only amongst children, but also in the general public. The physical education days are mainly intended for pupils of the lower primary schools. On these days boys should be taught, *by actual demonstration*, how to take care of skin, teeth, ear, nose, throat, etc. The guardians of the pupils should be invited to witness such demonstrations. Out of the two physical education weeks, one week, preferably coinciding with the Holi-holidays, should be spent by boys in improving the sanitation of the locality where their schools are situated and in going round the towns or villages with marching songs. The sanitation work and marches should be conducted in such a way as would teach the pupils dignity of labour and would develop in them a healthy spirit of social service. Boys in the upper forms of secondary schools should have camp life for at least two months in

their school career. In these camps, they should be subjected to strict discipline and hard gymnastic training. The camp may be organized at the tops of the hill-forts or in the vicinity of the villages. These two months of camp-life may be called Physical Education Months.

(4) *Lessons in anatomy, physiology, hygiene and dietetics*—These subjects should be in the hands of a physical educationist who should combine his teaching work in the class room and on playground into a harmonious whole, and thus create a living interest in the subjects.

Besides this regular work, senior students should be given every opportunity to develop their civic sense. They should be organized into volunteer corps and should be made responsible for the management of large fairs and huge meetings, to control crowds.

32. *General Plan of the Courses at the Training Institutes*—The success of the scheme we are recommending will entirely depend upon the quality of physical educationists. Hence it is desirable that their training should be as thorough as possible. They must not only have the practice but they must also know the theory of physical activities of every sort. That is why is included the study of anatomy, physiology, psychology, theory of gymnastics and theory of physical education, in the courses proposed for teachers in training at the Institute. In the courses recommended for the college, are included anthropology and ethnology, because grounding in these sciences is essential for the understanding of the laws of physical growth, and it is desirable that this side of physical education receives as much attention in our country as at least in China (21). Courses in corrective and remedial gymnastics are advised in the higher Training Institute, because our scheme of physical education is not intended merely for the normal and supernormal children but also for the subnormal. It is highly desirable that the teachers of physical education should be able to take care of as many defectives as possible, without invoking the aid of medical or surgical treatment. Knowledge of laboratory tests and methods of physical examination on the part of those who are trained at the college, is essential because they must be able to detect easily any abnormalities that may be present in their pupils.

33. The short-term courses recommended for teachers have a much humbler aim. These courses have been recommended, simply to make a systematic beginning in physical education immediately.

(A) *Courses in Physical Education at Short-Term Camps of Secondary Teachers*—

1. Physical Training Exercise, Swedish Exercises, Asanas and Pranayama.
2. Drill including Lathi.
3. Walking.
4. Running.

5. Climbing.
6. Jumping.
7. *Games*—A few compulsory and others voluntary.  
*Indian Games*—Khokho, Hututu, Patya, Vitidandu, etc.  
*English Games*—Football.
8. *Gymnastics*—Indian Clubs, Lezims, Pyramids, Namaskaras, Danda, etc. (Optional).
9. Air-Gun course to train the eye and character-qualities.
10. Signalling to train memory, eye, interest (Semaphore and Morse).
11. Map-Reading (Educational use of practical work in history, geography, etc.).
12. *General Knowledge*—To develop students' bent of mind and to enable the children to choose their living in future.
13. *Out-door work for educational subjects*—(history, geography, etc.).
14. *Scouting*—Out-door work and games; nature-study; visual instruction; judging distances; character building, etc.
15. Sanitation and Hygiene.
16. First Aid and Elementary Knowledge of the Body. (Anatomy and Physiology).

(B) *Courses in Physical Education, for Primary School Teachers—*

1. Games and Sports.
2. Physical Training including Danda, Namaskars, Asanas and Pranayama.
3. Mass Work, such as Club-Swinging, Lezim, etc.
4. Lathi and Lakadi.
5. General knowledge of anatomy, physiology, hygiene, dietetics, etc.

34. *Courses in Physical Education at the Physical Training Institute—*

1. Training in the items included in the general plan of physical activities given on pages 30–31 except remedial work. Lady students will be trained only in those physical activities which are available for their sex.
2. Anatomy.
3. Physiology.

4. Hygiene.
5. Dietetics.
6. Juvenile Psychology.
7. Adolescent Psychology.
8. Educational Psychology.
9. Theory of Physical Education.
10. Theory of Gymnastics.
11. School Hygiene and Class Management.
12. Organization of Physical Education.
13. Rowing.
14. First Aid.
15. Air-Gun and Rifle Practice.
16. Mother-craft and Infant-care.

35. *Courses in Physical Education at the College of Physical Education—*

1. Intensive Training in all the subjects recommended for the Physical Training Institute.
2. Elements of Anthropology.
3. Principles of Ethnology.
4. Microscopic and Chemical Laboratory Tests.
5. General Knowledge of Physical Examination.
6. Remedial Work including Orthopædy.

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A GENERAL PLAN OF PHYSICAL ACTIVITIES  
IN  
PRIMARY AND SECONDARY SCHOOLS

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*A General Plan of Physical Activities in*

| Serial No. | Kind of Activity                                    | Pre-Primary School<br>5-6 | Primary School |     |     |      |
|------------|---|---------------------------|----------------|-----|-----|------|
|            |   |                           | 6-7            | 7-8 | 8-9 | 9-10 |
| 1          | Free Play ..  |                           |                |     |     |      |
| 2          | Simple Imitation ..                                 |                           |                |     |     |      |
| 3          | Story Play, Dramatization<br>and Handicraft ..      |                           |                |     |     |      |
| 4          | Games of Low Organization                           |                           |                |     |     |      |
| 5          | Calisthenics ..                                     |                           |                |     |     |      |
| 6          | Rhythmic Activities ..                              |                           |                |     |     |      |
| 7          | Mass Work Lezim ..                                  |                           |                |     |     |      |
| 8          | Mass Work Indian Clubs ..                           |                           |                |     |     |      |
| 9          | Mass Work Dumb-bells,<br>Wand Pole ..               |                           |                |     |     |      |
| 10         | Yogic Physical Culture,<br>Asanas and Pranayamas .. |                           |                |     |     |      |
| 11         | Namaskaras ..                                       |                           |                |     |     |      |
| 12         | Dand and Baithakas ..                               |                           |                |     |     |      |
| 13         | Balance Exercises ..                                |                           |                |     |     |      |
| 14         | Team Games and Sports ..                            |                           |                |     |     |      |
| 15         | Lakadi ..   |                           |                |     |     |      |
| 16         | Lathi ..  |                           |                |     |     |      |
| 17         | Individual Physical Tests ..                        |                           |                |     |     |      |
| 18         | Personal Combat ..                                  |                           |                |     |     |      |
| 19         | Athletics ..  |                           |                |     |     |      |
| 20         | Swimming ..   |                           |                |     |     |      |
| 21         | Outdoor Work ..                                     |                           |                |     |     |      |
| 22         | Military Training ..                                |                           |                |     |     |      |
| 23         | Corrective Exercises ..                             |                           |                |     |     |      |
| 24         | Remedial Exercises ..                               |                           |                |     |     |      |

*N.B.*—It is recommended that preference should be given to Indian games, suitably modified, Lezim and Indian Club drills should be preferred to dumb-bells and wand of our people. It must be borne in mind that physical activity is a means to an end, physical education programmes. Proficiency in foreign games, and reputation and the national view-point unwholesome, whatever good they may do to the individuals.



*Primary and Secondary Schools*

| Middle School |       |       | High School |       |       |       | Serial No. |
|---------------|-------|-------|-------------|-------|-------|-------|------------|
| 10—11         | 11—12 | 12—13 | 13—14       | 14—15 | 15—16 | 16—17 |            |
|               |       |       |             |       |       |       |            |
|               |       |       |             |       |       |       |            |
|               |       |       |             |       |       |       |            |
|               |       |       |             |       |       |       | 6          |
|               |       |       |             |       |       |       | 7          |
|               |       |       |             |       |       |       | 8          |
|               |       |       |             |       |       |       |            |
|               |       |       |             |       |       |       | 10         |
|               |       |       |             |       |       |       | 11         |
|               |       |       |             |       |       |       | 12         |
|               |       |       |             |       |       |       | 13         |
|               |       |       |             |       |       |       | 14         |
|               |       |       |             |       |       |       |            |
|               |       |       |             |       |       |       | 17         |
|               |       |       |             |       |       |       | 18         |
|               |       |       |             |       |       |       | 19         |
|               |       |       |             |       |       |       | 20         |
|               |       |       |             |       |       |       | 21         |
|               |       |       |             |       |       |       | 22         |
|               |       |       |             |       |       |       | 23         |
|               |       |       |             |       |       |       | 24         |

improved and organized, wherever necessary. For example, in mass work with instrudrills. New games may be invented, and foreign games Indianized to suit the needs namely, nation-building and this central idea should be the guiding principle in our status in foreign countries, if acquired at the expense of the national games, are from

## CHAPTER VI

## Gymnasia

36. It was in the year 1913 that Mr. P. C. Wren was first appointed on special duty for a period of two months for the purposes of holding classes of teachers for instructing them in the right methods of teaching *physical drill*. And later attempts of the Education Department for advancing physical education have been more or less of the same nature. The report of the Physical Education Committee of 1927-29 remains shelved to this date. The scout-movement has, indeed, rendered valuable service in making the boys smart and games-minded, but Government have not by their action so far shown that they are aware of the urgency of taking steps for securing qualified physical educationists.

During all these years private gymnasia have been doing all they could for the youth of the province, and had it not been for the attitude of suspicion about these institutions on the part of Government, some four decades ago, and the consequent indifference of the general public, these gymnasia by this time would have been abreast of similar institutions in other parts of the world. In spite of the odds which these Akhadas had to fight against, it is gratifying to see that there are still about a thousand of them functioning to-day. In their modernized form, the Mandals are largely attended by school-going children and have been supplying gymnastic instructors to a number of schools. Teachers trained at the Maharashtra Mandal, Poona, Hanuman Vyayama Prasarak Mandal, Amaraoti, the Jummadada Vyayama Mandir, Baroda; and the Gujarat Vyayama Pracharak Mandal, Ahmedabad, are working in some secondary schools to-day.

Even when the Committee's recommendations are fully implemented by Government, the help of these Mandals will still be required for several years to come for the physical welfare of non-school-going children. For every school-going child there are two non-school-going children, in our province, and the gymnasia would look to their physical well being. We, therefore, recommend that Government should give these gymnasia all possible help. The following measures for instance may be suggested for their encouragement :—

(1) Gymnasia should have a right to get themselves registered with the Government, the Education Department maintaining the register.

(2) Government should recognise such of them as apply for recognition as Special schools and register them for grant-in-aid like ordinary primary and secondary institutions.

(3) Lands belonging to Government and to local bodies should be made available to them free of cost, their claims being considered second only to those of the schools in the locality.

(4) In return, the gymnasia should subject themselves to a general supervision by the Educational Department. This gesture of good-will

and favour will infuse in them a new spirit and within a few years they will acquire the place in the public life of the province which they have a right to occupy.

Already some of these gymnasia are throbbing with new life and pulsating with fresh blood. The impulse of the new age was first felt by Prof. Manikrao, the Founder-Director of the Jummadada Vyayama Mandir; Baroda, and about thirty years ago, he revolutionised Indian physical culture by adapting it to mass movement. A mention has already been made of the Maharashtra Mandal, Poona; Gujarat Vyayama Pracharak Mandal, Ahmedabad, and the Hanuman Vyayama Prasarak Mandal, Amraoti. Besides these, there are the Karnatak Vyayama Mandal, Dharwar, and the Kathiawar Vyayama Prasarak Mandal, Bhavnagar, rendering valuable service to the cause of physical culture along modern lines. It is noteworthy that the Hanuman Vyayama Prasarak Mandal had the honour of organizing the first successful demonstration of Indian physical culture at the last Olympic gathering, at Berlin. The Gujarat Vyayama Pracharak Mandal owes its existence, progress and prosperity to Mr. C. B. Purani, the Secretary of our Committee. This Mandal has a hundred Vyayama Shalas affiliated to it and the Ahmedabad Municipality has now started a Vyayama Vidyalaya with the help of this Mandal. The institution is worked by a qualified staff and has a course of studies similar to that recommended by the Committee for the Physical Training Institute. Similiar institutions will be rising in the other divisions of our province, if adequate financial help be forthcoming. They can develop into excellent training schools of physical education and supplement the effort of Government.

## CHAPTER VII

## The Question of Nutrition

37. In any consideration of physical education, the question of nutrition must occupy a prominent place. Nutrition experts have unanimously come to the conclusion that the differences to be found in the physique of different races are largely due to their daily diet. Some of the finest physical specimens to be found in certain races of North India are declared to be the result of their superior dietary. Colonel McCarrison tried a large number of experiments on rats, feeding them on well-balanced\* and ill-balanced\* diets. There was a remarkable difference in the results. There was no case of illness among the well-fed rats and no deaths from natural causes. On the other hand, ill-fed rats showed the following morbid states: "Pneumonia and other diseases of the lungs; diseases of the nose and the passages leading from it; diseases of the ear causing pus formation; adenoids; diseases of the eye which may lead to actual blindness, etc.," (25). There was a striking difference also in the growth of these two types of rats. The growth of well-fed rats was four times as great as that of the ill-fed ones. A reference to Appendix No. 5, giving the percentages of diseases noted among the primary school children of Bombay, would indicate in a striking way the similarity of the diseases enumerated in that appendix and those referred to above.

The Japanese are well-known for their short stature. Japanese scientists, recognising the great value of dietary, fed certain school-going children upon the diet used by taller races and found them to be several inches taller and several pounds weightier than the children who were fed on the normal diet of the country (26). So, it is clear that any scheme of physical education cannot be made a complete success, unless adequate arrangements are made for the proper feeding of the school going population.

Nutrition experts have also found that diet largely influences psychological growth. Research in dietetics clearly points out that mental backwardness can often be attributed to mal-nutrition.

Health Bulletin No. 23 published by the Government of India (27), and a booklet on balanced diets published by the Government of Bombay (28), suggest excellent plans for balancing the daily diet, both vegetarian and non-vegetarian, so as to get the best nutrition at as low a cost as possible. These bulletins and similar literature have a great educative value, and we strongly recommend that simple literature based on the facts noticed in these bulletins and written in a non-technical language should be got ready by Government in all the languages of the

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\*The expression "Balanced Diet" does not mean that different kinds of food are to be actually weighed daily and used in strict proportion. It only means that the diet or, more correctly, our daily food should contain the different components of food in a certain proportion (28).

Presidency and should be widely distributed among the public. The subject is already discussed in schools in the course of lessons on hygiene, but not with adequate emphasis and knowledge of Indian conditions. The Standing Committee may either prepare their own text-books or guide the authors of such text-books as are already used in schools in revising them properly.

The British Nutrition Committee, in its report of 1933, has greatly emphasized the value of milk as a food for young children, and has recommended that it should be included in the diet of every child (29). His Excellency the Viceroy, recently addressing the Medical Research Workers' Conference, also laid great stress on the question of finding milk for our poor children.

It is, however, true that the problem of nutrition is almost entirely dependent upon the economic condition of our province. As stated in the Health Bulletin No. 23, balanced diets are more costly than the ill-balanced diets and the cheapest balanced diet cannot cost anything less than Rs. 5 per month. When it is remembered that the monthly average individual income in India is about Rs. 2-8-0 per month, it at once becomes clear that the problem of nutrition cannot be solved unless the economic condition of the country improves.

However, we shall have to wait indefinitely if we decide to wait for the solution of the problem of nutrition till every Indian parent is in a position to find adequate nutrition for his children. Government and the wealthier classes of the society must co-operate and secure adequate nutrition to the poor school-going children, so that they may grow into healthier adults. Charitable endowments for free feeding, like Sadavarts attached to the religious institutions for feeding the poor, should all be reserved for feeding the poor school-going children exclusively. For organising charity and driving it into proper channels much educative propaganda will be necessary, and the work may be entrusted to the Standing Committee on Physical Education recommended in paragraph 17.

We would strongly recommend to Government to treat this problem of nutrition as of extreme importance, and secure the control of Sadavarts and other endowments for feeding the poor by legislation, if necessary. Government may also with advantage try experiments to ascertain the nutritive value of cheap stuffs like ground-nut cake in the case of school-going children.

## CHAPTER VIII

## Need for Educative Propaganda

38. In the introduction of "Physical Education for Boys", a collection of articles written by some of the leading educationalists in England, the authors say :

"Such a book would have been unthinkable in 1909 when the Board of Education first came to real grips with the problem of physical education, because (it is not unfair to say) the vast majority of schoolmasters had no experience of anything worthy of the name, and were accustomed to regard physical exercises as a species of drill, which indeed they usually were. The subject thus narrowly conceived was not thought of as fundamentally important in the boys' development, and certainly not as a suitable field of activity for men possessed of education and culture. Much educative work had to be done and much prejudice broken down before the movement for reform could be made to gather way. The principle had to be established—*against all accepted notions*—that physical education was an integral part of a full and satisfactory general education, and that to achieve this integration, its direction, at any rate in boys' schools, needed to be placed in the hands of men who had general teaching experience."

"This book could scarcely have been written *even ten years ago*, for although by that time more than 800 secondary schoolmasters had qualified themselves to give the instruction by attending the courses in physical education provided for them by the Board, the necessary length of experience was lacking". (Italics are ours.)

39. In India we do not stand to-day where England stood in 1926, not even where England stood in 1909. Because in England three years earlier to 1909, the Education (Provision of Meals) Act of 1906 was passed in order to secure that no child should be prevented *by want of food* from profiting by the education given in public elementary schools. Again in 1907 the Education (Administrative Provisions) Act was passed empowering local education authorities to provide play centres or other means of recreation for children and imposing upon the Authorities the duty of undertaking children's medical inspection. Nothing of this kind has been yet thought of in this province, up till now.

Further, what has been achieved by England in the field of physical education with her vast economic resources and with the ceaseless and sincere efforts of the Board of Education, during the last thirty years, is much below the standard which the leading physical educationists of the country would wish to attain.

40. In the light of these facts we would at once realise that physical education, if it is to make any headway in our province, must be taken up as a national problem of first-rate importance and must be attacked on all fronts. We have to fight against tremendous odds. Government's

resources are lamentably scanty, our poverty is heart-rending, the attitude of the enlightened public toward physical education is still apathetic, the illiteracy amongst our masses is appalling, and the medical profession has not yet established the close association with the teaching profession which they have done elsewhere. And although the youth of the country and the teachers have realised the advantages of a healthy life and a strong body, they are, as a rule, ignorant of the correct principles of physical education.

Under these circumstances the mere establishment of training institutions for teachers and introduction of compulsory physical education in schools, will not serve our purpose. Unless and until public opinion is educated enough to appreciate new views on physical education, Government efforts will not succeed in achieving anything substantial in this field of educational activity. Again, it is not merely for the intellectual support that the public opinion is to be educated. Liberal financial help must be coming from the public, and the right sort of men must take charge of physical education, if the physical education movement is to gather momentum at an early date. The organization of nutrition-centres recommended in Chapter VII, will, for instance, be impossible without an extensive propaganda throughout the province.

It seems desirable to have a special agency for carrying on this educative propaganda and the Standing Committee on Physical Education recommended in Chapter III, may be entrusted with this duty and provided with adequate funds for its propaganda activities, the chairman of the committee being endowed with all the status and the authority that is necessary to initiate and conduct this propaganda.

41. If the Committee's recommendations are all implemented immediately, by establishing the Training Institute and giving physical education in schools the status of a major subject, as also by creating the right sort of atmosphere for physical education activities, our province will be advancing with rapid strides physically, mentally, morally and politically. As observed by His Excellency Sir R. Lumley, "The Youth of India are inspired to-day by a desire to serve their country and to make her happy and to see her great". Now, it is the duty of Government to help this inspiration to grow by creating full facilities for physical education, and to enable the youth to see that the Motherland occupies a place of honour under the sun.

## CHAPTER IX

## Summary of Recommendation.

1. Physical education should be looked upon as an integral part of general education.

2. Government should undertake the responsibility of paying the full share of grant-in-aid due on all expenditure on physical education incurred by a school or a local body, irrespective of Government's ability to pay the ordinary grant-in-aid on the total expenditure of that school or local body.

3. The expenditure on expensive games like tennis and cricket, should not be considered as admissible for the grant-in-aid recommended above.

4. Where suitable land is available Government and local bodies should either make a free gift of it to the local schools or at least permit its use on a nominal rent. Where such land is not available suitable plots should be acquired for schools on a grant-in-aid basis.

To solve the problem in big cities, Government should press the respective municipalities to make adequate provision for open spaces in their town planning schemes.

5. Physical education should be considered as a compulsory subject in the school courses of studies and it should have the status of a major subject—mother-tongue, history or mathematics. The minimum period of tuition should be laid down as five hours instead of four, per day, out of which 45 minutes at least should be given to physical activities.

6. As the physical training periods must be either from 4 to 6 p.m. or from 7 to 9 a.m., it is necessary that the majority of the class-room teachers should also be physical instructors and be able to control the classes on the playground as well as in the class-rooms.

7. Government should start a Training Institute for Physical Education in June, 1938, admission to it being open to Graduates. The total number of admissions to this Institute should be 100, and half the number of the places may be given to women applicants. No fees should be charged in this Institute for tuition, and about 10 per cent. of the students under training should receive stipends.

The staff should consist of the Principal (an Indian) and four assistants, two of whom should preferably be qualified women teachers.

8. Government should also investigate the possibilities of establishing at an early date a College of Physical Education, on a par with the College of Engineering, with a three years' course after the Intermediate Examination in Science.

9. As soon as the time is ripe for it, Government should create a special agency for inspecting and directing the physical education in schools, the agency consisting of the Chief Inspector with four Divisional inspectors and the requisite number of District Supervisors.



10. Government should also institute short term courses (i) for secondary teachers, (ii) for primary teachers in rural areas and (iii) for primary teachers in district towns. The first should be given in central camps, and the second by itinerent teachers moving from place to place. The third should obviously be in the district town itself.

11. Some legislation seems necessary to prevent the approach of hawkers to the streets where schools are situated, during the time of the day when the schools are in session.

12. Government should create a statutory Standing Committee to advise the Minister of Education on all matters of physical education, the committee consisting of three ex-officio members and six non-officials, the chairman of the committee being nominated by Government from among the non-official members.

13. The Standing Committee should be responsible for propoganda on physical education.

14. The Committee recognizes the gymnasia as valuable national assets in physical education and recommends that they should receive help from Government.

15. Hindi should be used when commands are given in P. T. exercises.

16. The Physical Training Institute should be located in Poona on the Deccan College premises.

17. In Physical education syllabuses preference should be given to Indian games.

18. Physical Education Days, Weeks and Months should be observed in schools. Days for demonstration in hygiene, Weeks for social work and tournaments, and Months for military training.

19. Senior students should be formed into volunteer corps to render social service.

20. Pamphlets on diets written in simple style in the different languages of the province, should be widely distributed by Government, to educate the masses in dietetics.

21. The Standing Committee may prepare its own text-books on dietetics for the use of school children or guide the authors of such text-books as are already used in schools, in revising them.

22. The Standing Committee should undertake educative propoganda for organizing charity and supplying milk, free of cost, to school-going children.

23. Government should control Sadavartas and other endowments for feeding the poor, by legislation if necessary, and should reserve them for the benefit of school-going children.

## APPENDIX No. 1-A

## SYLLABUS OF PHYSICAL TRAINING

(For Boys)

AGE—6.

*Physical Activities—*

## A. Fundamental and free movements as shown below :—

- |                                      |  |
|--------------------------------------|--|
| 1. Walking .. ..                     | (a) Backwards.<br>(b) Sideways, left.<br>(c) Sideways, right.  |
| 2. Walking on heels .. ..            | (a) Forward.<br>(b) Backwards.<br>(c) Sideways, left.<br>(d) Sideways, right.  |
| 3. Walking on toes .. ..             | (a) Forward.<br>(b) Backwards.<br>(c) Sideways, left.<br>(d) Sideways, right.  |
| 4. Running .. ..                     | (a) Forward.<br>(b) Backwards.<br>(c) Sideways, left.<br>(d) Sideways, right.  |
| 5. Running on heels .. ..            | (a) Forward.<br>(b) Backwards.<br>(c) Sideways, left.<br>(d) Sideways, right.  |
| 6. Running on toes .. ..             | (a) Forward.<br>(b) Backwards.<br>(c) Sideways, left.<br>(d) Sideways, right.  |
| 7. Running with high knee raising .. | (a) Forward.<br>(b) Backwards.<br>(c) On the spot.   |
| 8. Jumping (astride) .. .            | (a) Forward.<br>(b) Backwards.<br>(c) Sideways, left.<br>(d) Sideways, right.<br>(e) Upward.   |
| 9. Jumping (feet together) ..        | (a) Forward.<br>(b) Backwards.<br>(c) Sideways, left.<br>(d) Sideways, right.<br>(e) Upward.<br>(f) Sideways, right and left alternately.<br>(g) Forward and backward alternately. |

- 10. Hopping (with right leg) .. (a) Forward.  
(b) Backwards.  
(c) Sideways, left.  
(d) Sideways, right.  
(e) Upward.  
(f) Sideways, right and left alternately.  
(g) Forward and backward alternately.
- 11. Hopping (with left leg) .. (a) Forward.  
(b) Backwards.  
(c) Sideways, left.  
(d) Sideways, right.  
(e) Upward.  
(f) Sideways, right and left alternately.  
(g) Forward and backward alternately.
- 12. Tumbling .. .. (a) Forward.  
(b) Backwards.
- 13. Rolling .. .. (a) Right.  
(b) Left.
- 14. Crawling—with different distances (a) Forward.  
between hands and feet. (b) Backwards.
- 15. Circular movements of the hands at (a) Clock-wise.  
right angles to the body. (b) Anti-clock-wise.
- 16. Circular movements of the hands— (a) Clock-wise.  
parallel to the body. (b) Anti-clock-wise.

B. Story plays or dramatizations.

C. Train with steam engine.

Time—

|      |    |    |    |    |      |
|------|----|----|----|----|------|
| A    | .. | .. | .. | .. | 2 m. |
| Rest | .. | .. | .. | .. | 1 m. |
| A    | .. | .. | .. | .. | 2 m. |
| Rest | .. | .. | .. | .. | 1 m. |
| B    | .. | .. | .. | .. | 2 m. |
| Rest | .. | .. | .. | .. | 1 m. |
| B    | .. | .. | .. | .. | 2 m. |
| Rest | .. | .. | .. | .. | 1 m. |
| C    | .. | .. | .. | .. | 2 m. |

Total Time— 14 m.

Apparatus—Nil.

References—10, 39, 40 and 41.

(These references are to books enlisted in Appendix No. 3.)

II. AGES—7 and 8.

Physical Activities—

A. Fundamental and free movements as shown under I.

B. Exercises as given in the 18 lessons in Board of Education's Syllabus of Physical Training in School, 1933. (Only those items are to be taken up that require no apparatus.)

## C. Games—

- (i) As given in Mr. Y. G. Modak's book "Lahan Mulanche Khel" and Mr. Joshi and Dr. Natu's book "Khelancha Sangraha."  
 (ii) Similar games from "Prathamik Shalanteel Shareerik Shikshana Paddhati."  
 (iii) Games other than those given in "18 Lessons in B. E. S. P. T." which do not require any apparatus.

## Time—

|      |    |    |    |       |
|------|----|----|----|-------|
| A    | .. | .. | .. | 3 m.  |
| Rest | .. | .. | .. | 1 m.  |
| A    | .. | .. | .. | 3 m.  |
| Rest | .. | .. | .. | 1 m.  |
| B    | .. | .. | .. | 4 m.  |
| Rest | .. | .. | .. | 1 m.  |
| B    | .. | .. | .. | 4 m.  |
| Rest | .. | .. | .. | 1 m.  |
| C    | .. | .. | .. | 12 m. |

Total Time—30 m.

Apparatus—Nil.

References—20, 39, 40 and 41. .

## III. AGES—9 and 10.

## Physical Activities—

A. Fundamental and free movements as shown under I.

B. Sarvanga Sundar Vyayama—

|        |    |                      |                    |
|--------|----|----------------------|--------------------|
| Part 1 | .. | 1. Zole-hath.        | 5. Mishra Hath-do. |
|        |    | 2. Shiri-do.         | 6. Kalai-dhum.     |
|        |    | 3. Chhata Cho-dan.   | 7. Kalai Dhum-do.  |
|        |    | 4. Mishra-hath.      |                    |
| Part 2 | .. | 1. Kamar-zuk.        | 5. Kukh Kas-do.    |
|        |    | 2. Kamar-pavitra.    | 6. Meru-tan.       |
|        |    | 3. Kamar Pavitra-do. | 7. Meru Tan-do.    |
|        |    | 4. Kukh-kas.         |                    |
| Part 3 | .. | 1. Age-pao.          | 4. Pet-guthan.     |
|        |    | 2. Peechhe-pao.      | 5. Pet Guthan-do.  |
|        |    | 3. Baju-pao.         |                    |
| Part 4 | .. | 1. Tarai-sidhi.      | 4. Dorukh-zoledar. |
|        |    | 2. Seedhi-phek.      | 5. Kamar-kas.      |
|        |    | 3. Do-mukh.          |                    |

B'. Exercises given in tables 1 to 18 of B. E. S. P. T. to be freely used, provided they require no apparatus.

C.—

(i) Tiparya, six varieties.

(ii) Wand Drill—

1. Kamar-zuk.
2. Peeth Hath, Baith Jao.
3. Kukh-ani.
4. Teerchhe Hool, ek.
5. Teerchhe Hool, do.
6. Pao-patak.
7. Pao Patak, Do-ruk.
8. Sheer Ghum-bath.
9. Kamar-kas.
10. Kamar Kas, Do-mukh.
11. Pachfer-kukh.

## D. Games—

- (i) As given in Mr. Y. G. Modak's book "Lahan Mulancho Khel" and Mr. Joshi and Dr. Natu's book "Khelancha Sangraha."  
 (ii) Similar games from "Prathamik Shalanteel Shareerik Shikshan Paddhati."  
 (iii) Games other than those given in "18 Lessons in B. E. S. P. T." which do not require any apparatus.

## Time—

|                     |    |    |    |    |       |
|---------------------|----|----|----|----|-------|
| A                   | .. | .. | .. | .. | 3 m.  |
| Rest                | .. | .. | .. | .. | 1 m.  |
| B or B <sup>2</sup> | .. | .. | .. | .. | 5 m.  |
| Rest                | .. | .. | .. | .. | 1 m.  |
| C                   | .. | .. | .. | .. | 9 m.  |
| Rest                | .. | .. | .. | .. | 1 m.  |
| D                   | .. | .. | .. | .. | 15 m. |

Total Time—35 m.

## Apparatus—

- (i) Tiparya.  
 (ii) Wands.

References—20, 39, 40, 41 and 42.

## IV. AGES—11 and 12.

## Physical Activities—

A. Fundamental and free movements as shown under I.

B. (Exercises under this item are to be done four times a week.)—

## (i) Clubs—

- |                    |                          |
|--------------------|--------------------------|
| 1. Zole.           | 12. Rumali-do.           |
| 2. Bag-li.         | 13. Duheri-Shiri.        |
| 3. Duheri-Bagal.   | 14. Phekan Sidhi.        |
| 4. Bagal-lapet.    | 15. Phekan Ulti.         |
| 5. Akeri-zoledar.  | 16. Seedhee-tarai.       |
| 6. Anidar-ek.      | 17. Ulti-tarai.          |
| 7. Anidar-do.      | 18. Pavitra-dorukh.      |
| 8. Duheri-zoledar. | 19. Vajedar-seedhee.     |
| 9. Kadam-khol.     | 20. Vajedar-ulti.        |
| 10. Shiri.         | 21. Seedhee-kalai-moch.  |
| 11. Rumali-ek.     | 22. Vajedar Kalai-marod. |

## (ii) Lezim—

- |                      |                  |
|----------------------|------------------|
| 1. Ek-jaghe.         | 11. Do-ruk.      |
| 2. Adhi-lagao.       | 12. Jo-har.      |
| 3. Pavitra.          | 13. Chandra-vat. |
| 4. Goal-chal.        | 14. Maa-miya.    |
| 5. Goal-chal-do.     | 15. Do-mal.      |
| 6. Chakra-goal.      | 16. Dag-nami.    |
| 7. Goal-baithak.     | 17. Gaj-bel.     |
| 8. Muh-milaph.       | 18. Putzla.      |
| 9. Muh-milaph-do.    | 19. Sher-dhaj.   |
| 10. Vajedar-baithak. | 20. Dast-pao.    |

## (iii) Lakdi—

## Ekang Lakdi

- |                  |                |
|------------------|----------------|
| 1. Ghumcha-hath. | 4. Lagst-hath. |
| 2. Phalang-hath. | 5. Dub-leo.    |
| 3. Bagal-hath.   |                |

*Do Ang Lakdi*

- |                    |                       |
|--------------------|-----------------------|
| 1. Salami (Vande). | 6. Kamar-dub-pher.    |
| 2. Do-dub.         | 7. Kamar-pher.        |
| 3. Kamar-dast.     | 8. Kamar Pher-adanga. |
| 4. Kamar-adanga.   | 9. Dab Pher-dub.      |
| 5. Do-jut.         |                       |

## (iv) Dumb-bells—

- |                     |                      |
|---------------------|----------------------|
| 1. Upar Niche-thok. | 4. Age Peechhe-thok. |
| 2. Kamar Zuk-thok.  | 5. Choupher-thok.    |
| 3. Adanga-thok.     |                      |

B'. (Exercises under this item are to be done twice a week.)—  
Some exercises from tables 19 to 36 of B. E. S. P. T.

## C. Games—

- (i) As given in Mr. Y. G. Modak's book "Lahan Mulanche Khel" and Mr. Joshi and Dr. Natu's book "Khelancha Sangraha".
- (ii) Similar games from "Physical Education" by H. P. Haley, pp. 124—198.  
(Those that have not been taken up to now and admit of being played without any apparatus. Omit last five.)

*Time—*

|                     |    |    |    |    |    |       |
|---------------------|----|----|----|----|----|-------|
| A                   | .. | .. | .. | .. | .. | 4 m.  |
| Rest                | .. | .. | .. | .. | .. | 1 m.  |
| B or B <sup>1</sup> | .. | .. | .. | .. | .. | 15 m. |
| Rest                | .. | .. | .. | .. | .. | 2 m.  |
| C                   | .. | .. | .. | .. | .. | 18 m. |

---

Total Time—40 m

*Apparatus—*

- (i) Indian Clubs.  
(ii) Lezim.  
(iii) Lakdi.  
(iv) Dumb-bells (Wooden).  
(v) Footballs.  
(vi) Ropes.

References—20, 39, 40, 41, 42 and 43.

## V. AGES—13 and 14.

*Physical Activities—*

A. Fundamental and free movements as shown under I.

B. (Four times a week)—

## (i) Dand—

- |                   |                  |
|-------------------|------------------|
| 1. Namaskar Vaje. | 3. Bajrang Dand. |
| 2. Sher Dand.     | 4. Mayoer Dand.  |

## (ii) Baithak—

- |           |              |
|-----------|--------------|
| 1. Sarak. | 3. Daudvaja. |
| 2. Putki. |              |

## (iii) Asanas—

- |                        |                      |
|------------------------|----------------------|
| 1. Bhujangasana.       | 5. Viparita Karani.  |
| 2. Shalabhasana.       | 6. Paschimastana.    |
| 3. Ardha-Shalabhasana. | 7. Dahina Vakrasana. |
| 4. Dhanurasana.        | 8. Baya Vakrasana.   |

- (iv) Pranayama .. Ujjayi.
- (v) Namaskar.
- (vi) Farigadaga—
- |                      |           |
|----------------------|-----------|
| 1. Pavitra-sherdhaj. | 4. Cheer. |
| 2. Tamacha.          | 5. Sheer. |
| 3. Kamar.            |           |
- (vii) Lathi—
- |                 |                     |
|-----------------|---------------------|
| 1. Seedha Hath. | 8. Peechhe-phalang. |
| 2. Ulta Hath.   | 9. Jang-muh.        |
| 3. Do-rukh.     | 10. Bagal-muh.      |
| 4. Ghum Jao.    | 11. Ani-kat.        |
| 5. Namaste-ek.  | 12. Choumukhi-ek.   |
| 6. Namaste-do.  | 13. Choumukhi-do.   |
| 7. Age phalang. | 14. Ladhant-ek.     |
- (viii) Malkhamb .. .. Simple Exercises.
- (ix) Kusti—
- |                         |                          |
|-------------------------|--------------------------|
| 1. Pavitra done bajuka. | 6. Kalai rok.            |
| 2. Salami (Vande).      | 7. Seena rok.            |
| 3. Dandaki dhakel.      | 8. Samne kalai chhudana. |
| 4. Mondhekee dhakel.    | 9. Pher kalai.           |
| 5. Gardanki dhakel.     | 10. Panje kee roak.      |
- (x) Drill—
- |                                 |                                   |
|---------------------------------|-----------------------------------|
| (Hindustani Words of Command).  | (English Words of Command).       |
| <i>Rakavaise-Namasteka Kam.</i> | <i>Saluting by Numbers.</i>       |
| 1. Sanmukh Namaste ; ek, do ..  | Salute to the Front, one, two.    |
| 3. Dahine Namaste ; ek, do ..   | Salute to the left, one, two.     |
| <i>Eksath Namasteka Kam.</i>    | <i>Saluting judging the Time.</i> |
| 4. Sanmukh, Namaste ..          | Salute to the front, Salute.      |
| 5. Dahine, Namaste ..           | Salute to the right, Salute.      |
| 6. Bae, Namaste ..              | Salute to the left, Salute.       |
| 7. Josh-Kadam ..                | Quick March.                      |
| 8. Rukh-jao ..                  | Halt.                             |
| 9. Josh Kadam ..                | Quick March.                      |
| 10. Talse-kadam ..              | Mark Time.                        |
| 11. Chal-deo ..                 | Forward.                          |
| 12. Ahis-ta ..                  | Step, short.                      |
| 13. Dahine-juj ..               | Right Incline.                    |
| 14. Bae-juj ..                  | Left Incline.                     |
| 15. Dahine-Nigha ..             | Eyes Right.                       |
| 16. Bae-Nigha ..                | Eyes Left.                        |
| 17. Samoo-nigha ..              | Eyes Front.                       |
| 18. Zadap-se ..                 | Step-out.                         |

19. Josh-kadam .. Quick Step.
20. Pao-badal .. Change Step.
21. Ek Beech. (Dahine ya bae) Mil-jao. Even Numbers, (right or left), Close March.
22. Beech-beju, (Dahine ya bae) Mil-jao. Odd Numbers, (right or left), Close March.
23. Beech-beech, Mil-jao .. Centre, Close March.
24. Dahine-rukhh .. Right Turn.
25. Bae-rukhh .. Left Turn.
26. Ghum Jao .. About Turn.
27. Dahinese Chakra, Josh-kadam .. Right Wheel, Quick March.
28. Baese Chakra, Josh-kadam .. Left Wheel, Quick March.
29. Dahine, Ghuman Chakra, Josh-kadam. Right About Wheel, Quick March.
30. Bae Ghuman Chakra, Josh-kadam.. Left About Wheel, Quick March.
31. Jorse-kadam .. Double March.
32. Sthir, kadam, jor .. Double Mark, Time.
33. Rukh-jao .. Halt.

B'. (Twice a week)—

Some exercises from tables 37 to 42 of B. E. S. P. T.

C. Games—(Four times a week)—

- (i) Khokho, Langdi and Viti-Dandu to be played according to the rules that would be laid down by Standing Committee.
- (ii) Football.
- (iii) As given in Mr. Y. G. Modak's book "Lahan Mulanche Khel" and Mr. Joshi and Dr. Natu's book "Khelancha Sangraha".

C'. Racing Events—(Twice a week) —

As given in reference book No 44, but greatly moderated.

Time—

|         |    |    |    |    |    |       |
|---------|----|----|----|----|----|-------|
| A       | .. | .. | .. | .. | .. | 4 m.  |
| Rest    | .. | .. | .. | .. | .. | 1 m.  |
| B or B' | .. | .. | .. | .. | .. | 15 m. |
| Rest    | .. | .. | .. | .. | .. | 2 m.  |
| C or C' | .. | .. | .. | .. | .. | 18 m. |

Total Time— 40 m.

Apparatus—

- (a) Lathis.  
 (b) Viti-dandus.  
 (c) Footballs.

References—20, 39, 40, 41, 42, 44, 45, 46 and 47.



## VI. AGES—15 and 16.

*Physical Activities—*

## A. Fundamental and free movements as shown under I.

## B. (i) Danda—

- |               |                     |
|---------------|---------------------|
| 1. Seedhe.    | 4. Gardankasi.      |
| 2. Dandjot.   | 5. Chakra Danda I.  |
| 3. Seenakasi. | 6. Chakra Danda II. |

## (ii) Baithak —

- |            |                   |
|------------|-------------------|
| 1. Lahera. | 3. Panja Baithak. |
| 2. Khadi.  | 4. Kudan.         |

(iii) Asanas .. As in V, B above.

(iv) Pranayama .. As in V, B above.

(v) Namaskar .. As in V, B above.

## B'. (i) Farigadaga—

- |            |                |
|------------|----------------|
| 1. Ani.    | 4. Rokh.       |
| 2. Bahera. | 5. Ladhant do. |
| 3. Ekang.  |                |

## (ii) Lathi—

- |                      |                   |
|----------------------|-------------------|
| 1. Choumukhi-jang.   | 7.                |
| 2. Choumukhi-bagal.  | 8. Dohari-do-bel. |
| 3. Anikat-choumukhi. | 9. Chakra-bel.    |
| 4. Ekhari-bel.       | 10. Mishra-bel.   |
| 5. Seedhee-bel.      | 11. Jang-bel.     |
| 6. Ulthi bel.        |                   |

## (iii) Malkhamb

## Advanced exercises.

## (iv) Kusti—

- |             |               |
|-------------|---------------|
| 1. Lukan.   | 6. Buta.      |
| 2. Doob.    | 7. Patka kam. |
| 3. Zatka.   | 8. Tang tol.  |
| 4. Dodasti. | 9. Ukhed.     |
| 5. Dhole.   |               |

## C. Games—(Four times a week).—

- |                        |    |  |
|------------------------|----|--|
| (i) Atyapatya .. .. .  | .. | } To be played according to rules that would be laid down by the Standing Committee. |
| (ii) Hututu .. .. .    | .. |  |
| (iii) Football .. .. . | .. |  |

## C'. Field Events—(Thrice a week).—

- |                                 |    |   |
|---------------------------------|----|---|
| (i) The High Jump .. .. .       | .. | } As given in reference book No. 44, but greatly moderated. |
| (ii) The Pole Vault .. .. .     | .. |   |
| (iii) Long Jump .. .. .         | .. |   |
| (iv) Hop, Step and Jump .. .. . | .. |   |
| (v) Shot put .. .. .            | .. |   |

*Time—*

|         |    |    |    |    |    |       |
|---------|----|----|----|----|----|-------|
| A       | .. | .. | .. | .. | .. | 2 m.  |
| Rest    | .. | .. | .. | .. | .. | 1 m.  |
| B       | .. | .. | .. | .. | .. | 10 m. |
| Rest    | .. | .. | .. | .. | .. | 2 m.  |
| B'      | .. | .. | .. | .. | .. | 15 m. |
| Rest    | .. | .. | .. | .. | .. | 2 m.  |
| C or C' | .. | .. | .. | .. | .. | 18 m. |

Total Time— 50 m.

*Apparatus—*

- Farigadagas.
- Lathis.
- Footballs.
- Shots.
- Apparatus for field events given in C', (i).

Reference—42, 44, 45 and 47.

*N.B.*—Some items of military training are included in the syllabus given above. The remaining items should be taken up at ages that would be determined by the Standing Committee of Physical Education.

References—50, 51, 52 and 55.

APPENDIX No. 1-B  
SYLLABUS OF PHYSICAL TRAINING  
(For Girls)

*N.B.*—Up to the age of 12, girls should have the same syllabus as boys. They should also play the following games according to their age groups.

**AGES—7 and 8.**

Karskarya.  
Kikiche pan.  
Zimma (Satari, Pankhi).  
Phugadi (ek hati, do hati).  
Shidi.  
Tikalaya pani.

**AGES—9 and 10.**

Odhaodhi.  
Khurchi.  
Ashi lave tashi lave.  
Bhalebhal.  
Zimma (ladvi, khandi).  
Phugadi (Kasao phugadi, makad phugadi).

**AGES—11 and 12.**

Udatkombada.  
Basatkombada.  
Bhorbhendi.  
Zimma (Choughicha, Nagamodi).  
Phugadi (Lolan Phugadi, Danda Phugadi).  
Pinga (sadha).

*References*—48.

**V. AGES—13 and 14.**

*Physical Activities*—

- A. Fundamental and free movements as shown under I, except jumping and hopping when the girl has completed her 13th year. Skipping should also be avoided.
- B. As in the case of boys with the following changes—
  - (i) Omit kusti and farigadaga. Practice of lathi individual.
  - (ii) Girls entering their 14th year should devote more days in the week to the practice of Asanas and Pranayama. Again, these should be practised individually and not in a mass. Slow and steady movements are recommended.
  - (iii) All exercises recommended for the previous age groups which are practised to the accompaniment of music should continue.

**B<sup>1</sup>.—**

Instead of using tables of B.E.S. P.T., take abdominal exercises recommended in Chapter VIII of Principles of Gymnastics for Women and Girls, Part 2, by E. Bjorkster.

**C. Games—**

1. Ghoda.
2. Pinga (hat var karun).
3. Mor.
4. Pimpalpan (shvasochhvas, udat).
5. Un un savali. Bedka bedka pai dhar. Kis kis baikis. Phugadi (choughichi, bas phugadi, bhui phugadi). Zimma (sakhali). Jate. Bhor Bhendi.

*Time*—As for boys.

*Apparatus*—Lathis.

*References*—18, 42, 47 and 48.

## VI. AGES—15 and 16—

*Physical Activities—*

A. The same as in V.

B. and B'. As in the case of boys with the following changes :—

- (i) Omit pharigadaga and kusti.
- (ii) Give more days in the week to Asanas and Pranayama. Danda and baithak as in the previous age group only.
- (iii) All exercises recommended for the lower age groups which are practised to the accompaniment of music should continue.

C. The same as in V, C above.

*Time*—As in V.

*Apparatus*—As in V.

*References*—As in V.

## APPENDIX No. 1-C

## STANDARDIZED APPARATUS ACCORDING TO AGE GROUPS

## I. CLUBS—

The bulbous variety should be used, the two clubs of the same pair being exactly equal in all respects. The following table shows the length, circumferences, and the weight of each club to be used for the various age groups :—

| Age      | Length in inches | Circumference of the handle | Circumference of the bulb | Weight in pounds |
|----------|------------------|-----------------------------|---------------------------|------------------|
| 11—12 .. | 18               | 3                           | 7                         | 1                |
| 13—14 .. | 21               | 4                           | 8                         | 2                |
| 15—16 .. | 24               | 4·5                         | 10                        | 2·5              |

## II. LEZM—

| Age      | Weight in pounds | Length of the short handle in inches | Length of the long handle in inches |
|----------|------------------|--------------------------------------|-------------------------------------|
| 11—12 .. | 1·25             | 4·5                                  | 15                                  |
| 13—14 .. | 1·5              | 4·5                                  | 15                                  |
| 15—16 .. | 2                | 5                                    | 18                                  |

  

| Age      | Length of the middle of the long handle in inches | Circumference of the middle of the long handle in inches | Perpendicular distance between the two handles in inches |
|----------|---|--|--|
| 11—12 .. | 3·5   | 4  | 7·5  |
| 13—14 .. | 3·5   | 4  | 7·5  |
| 15—16 .. | 4   | 4·5  | 9  |

## III. DUMB-BELLS (Wooden)—

| Age      | Weight in pounds | Circumference of the handle in inches |
|----------|------------------|---------------------------------------|
| 11—12 .. | 0·75             | 4                                     |

## IV. LATHI (Should be made of solid bamboo)—

| Age      | Weight in pounds | Length in inches | Smaller circumference in inches | Larger circumference in inches |
|----------|------------------|------------------|---------------------------------|--------------------------------|
| 13—14 .. | 1                | 4                | 3                               | 3·75                           |
| 15—16 .. | 1·5              | 4·5              | 3·5                             | 4·5                            |

## V. WAND (Should be made of solid bamboos)—

| Age     | Weight in pounds | Length in ft. | Circumference in inches |
|---------|------------------|---------------|-------------------------|
| 9—10 .. | 0·75             | 3·5           | 3·5                     |

## VI. LARDI (Should be made of solid bamboo)—

| Age      | Weight in pounds | Length in ft. | Circumference in inches |
|----------|------------------|---------------|-------------------------|
| 11—12 .. | 0·25             | 3             | 2                       |

## VII. TIPARYA (Should be made of solid bamboo)—

| Age     | Weight in pounds | Length in ft. | Circumference in inches |
|---------|------------------|---------------|-------------------------|
| 9—10 .. | 0.10             | 1             | 2                       |

## VIII. VTRI DANDU (Should be made of tough wood)—

| Age   |                              | Weight in ounces | Length | Circumference in inches |
|-------|------------------------------|------------------|--------|-------------------------|
| 13—14 | Viti (Tapering both ways) .. | 2.5              | 4"     | 3                       |
|       | Dandu ..                     | 16               | 2'     | 4                       |

*N.B.*—Weights and measures given here are only average weights and measures. Hence a little variation in these would not matter. Apparatus necessary for Western games, etc., requires no new standardization.

## APPENDIX No. 2

## FINANCIAL STATEMENTS FOR 1938-39

*A—Training Institute for Physical Education*

| (a) Staff—  | Rs.   | Rs.    |
|---|-------|--------|
| Principal, 300 × 12 ..                              | 3,600 |        |
| Two Senior Assistants, 400 × 9 ..                   | 3,600 |        |
| Two Junior Assistants, 200 × 9 ..                   | 1,800 |        |
| One Clerk, 60 × 12 ..                               | 720   |        |
|   | <hr/> | 9,720  |
| <br>(b) Menials—                                    |       |        |
| Two Peons, 40 × 12 ..                               | 480   |        |
| Two Servants, 40 × 12 ..                            | 480   |        |
| Two Watchmen, 40 × 12 ..                            | 480   |        |
|   | <hr/> | 1,440  |
| (c) Preliminary Equipment .. ..                     |       | 2,000  |
| (d) Library .. ..                                   |       | 2,000  |
| (e) Special Apparatus .. ..                         |       | 2,000  |
| (f) Upkeep of the Playground, etc. .. ..            |       | 1,000  |
| (g) Contingencies .. ..                             |       | 1,000  |
| (h) Medical Examination and Medical Service .. ..   |       | 500    |
| (i) Miscellaneous .. ..                             |       | 1,000  |
| (j) Advanced Increments to Staff if Necessary .. .. |       | 1,800  |
| (k) Stipends to Students, 250 × 12 .. ..            |       | 3,000  |
|   |       | <hr/>  |
| Total ..*   |       | 25,460 |

*B—Short-Term Courses for Secondary Schools*

|  |        |
|--|--------|
| (a) Travelling for 1,000 teachers .. ..                | 15,000 |
| (b) Messing for 200 teachers for 10 months .. ..       | 40,000 |
| (c) Payment to 8 Instructors—525 × 12 + 125 × 12 .. .. | 7,800  |
| (d) Payment to Clerk, 60 × 12 .. ..                    | 720    |
| (e) Payment to 8 Servants, 160 × 12 .. ..              | 1,920  |
| (f) Camping and Other Equipments .. ..                 | 8,000  |
| (g) Maintenance of Above .. ..                         | 600    |
| (h) Contingencies and Miscellaneous Charges .. ..      | 2,000  |
|  | <hr/>  |
| Total ..   | 76,040 |

*C—Short-Term Courses for Primary Teachers in Rural Areas*

|   | Rs.   |
|---|-------|
| (a) Payment to 4 Instructors, one for each division—300 × 12. 3,600 |       |
| Special allowance to Instructors, 100 × 12 ..                       | 1,200 |
|   | <hr/> |
| (b) 4 Servants, 80 × 12 (includes special allowance) ..             | 960   |
| (c) Travelling Allowance .. ..                                      | 1,000 |
| (d) Equipment .. ..   | 1,200 |
| (e) Camping Arrangements at the Training Centres ..                 | 2,000 |
|   | <hr/> |
| Total ..  | 9,960 |

*D—Short-Term Courses for Primary Teachers in District Towns for 1939-40*

|   | Rs.    |
|---|--------|
| (a) Payment to 40 Teachers—3,000 × 12 .. .. | 36,000 |
| (b) 40 Servants—800 × 12 .. ..              | 9,600  |
| (c) Equipment (Special) .. ..               | 2,000  |
| (d) Miscellaneous Charges 40 × 100 .. ..    | 4,000  |
|   | <hr/>  |
| Total ..                                    | 51,600 |
|   | <hr/>  |

*N.B.*—It is expected that these courses will first begin in 1939-40 and that the resources of the local Government high schools or the training colleges or private high schools if there be no Government high schools in any district towns, will be made available to the teachers in charge of these centres.

*E—Grant-in-aid to Schools*

As has been stated in paragraph 20 the following provision will be necessary for special grants for physical education :—

|  | Rs.      |
|--|----------|
| (a) For Secondary Schools .. ..                | 30,000   |
| (b) For Local Bodies for Primary Schools .. .. | 90,000   |
| (c) For Play-grounds .. ..                     | 25,000   |
|  | <hr/>    |
| Total ..                                       | 1,45,000 |
|  | <hr/>    |

## APPENDIX No. 3

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## APPENDIX No. 4

*List of institutions and individuals that helped the Committee's work by sending in their suggestions*

1. Arya Kreedha Mandala, Thana.
2. Balaji Vyayama Shala, Satara.
3. Bangalore Cantt. District Congress Committee, Bangalore (President).
4. The Bombay and Suburban Physical Culture Association.
5. District School Board, Ahmedabad (Chairman).
6. District School Board, Dharwar (Administrative Officer).
7. District School Board, Satara (Administrative Officer).
8. Government High School, Ahmedabad (Head Master).
9. Karnatak Education Board, Dharwar.
10. Karnatak Education Board, Dharwar (Chairman, Physical Culture Committee).
11. Karnatak Vyayama Vidyapeetha, Dharwar.
12. Lokamanya Seva Sangha, Vile Parle.
13. Madras Provincial Physical Education Association, Madras.
14. Maharashtra Seva Mandala, Bombay.
15. Municipal Schools Committee, Bombay (Physical Education Secretary).
16. Panvel Vyayama Prasarak Mandala, Panvel.
17. Proprietary High School, Ahmedabad (Head-master).
18. S. P. Hakimji High School, Bordi (Head-master).
19. Shree Maharani Tarabai Teachers' College, Kolhapur.
20. Shree Samartha Vyayama Mandira, Dadar.
21. Samartha Sevaka Mandala, Thana.

*Individuals*

22. Mr. Aradhye, G. P., Pandharpur.
23. Mr. Bahauddin Sheikh, Bhavnagar.
24. Mr. Bhatkhande, V. T., Kurla.
25. Mr. Buck, H. C., Madras.
26. Mr. Date, M. N., Baramati.
27. Mr. Dave, S. A., Bombay.
28. Mr. Dange, S. D., Dhulia.
29. Mr. Desai, C. K., Baroda.
30. Mr. Dikshit, S. C., Bombay.
31. Rev. Fernandes, P. E., Bombay.
32. Mr. Gandhi, N. H., Bombay.
33. Mr. Godbole, M. S., Sholapur.
34. Dr. Gokhale, V. B., Poona.

35. Mr. Gurav, R. D., Tasgaon.
36. Mr. Indapurkar, D. L., Dhulia.
37. Mr. Joag, S. R., Baroda.
38. Mr. Joshi, B. B., Ahmedabad.
39. Mr. Joshi, D. P., Poona.
40. Mr. Joshi, Y. G., Poona.
41. Mr. Kalyanpurkar, D. M., Bombay.
42. Mr. Kamath Sanjiv, Madras.
43. Mr. Kothiwale, D. B., Kolhapur.
44. Mr. Mahabal, K. B., Nasik.
45. Mr. Mahajan, S. J., Mahapa.
46. Sardar Abasaheb Mujumdar, Baroda.
47. Prof. Manikrao, Baroda.
48. Mr. Mirwankar, Dadar, Bombay.
49. Mr. Modak, Y. G., Bombay.
50. Mr. Naik, Y. D., Poona.
51. Mr. Narendra Singh, Agra.
52. Mr. Paranjpye, D. R., Satara.
53. Mr. Paranjpe, D. D., Kelshi.
54. Dr. Patel, P. T., Bombay.
55. Prof. Potdar, D. V., Poona.
56. Mr. Purandare, G. N., Kolhapur.
57. Shreemant Rajasaheb of Aundh, Aundh.
58. Mr. Ranadive, M. S., Dhulia.
59. Miss S. Rustumjee, Bombay.
60. Swami, Shivananda, Varud.
61. Mr. Shukla, S. U., Bombay.
62. Mr. Vivian, Dessa.
63. Mr. Vagh, B. P., Bombay.

At the request of the Chairman, the following persons supplied information on a medical point :—

64. Dr. Sir Mangaldas Mehta, Bombay.
65. Dr. Talwalkar, V. R., Ahmedabad.
66. Dr. Mrs. Thatte, Sangli.

The Chairman requested several foreign Consuls in Bombay to supply information regarding physical education in their respective countries. Most of them either wrote to their Governments for this information or suggested the channel through which to secure it.

Suggestions were also invited from the following :—

67. President, Broach Municipality.
68. Head Master, Government High School, Broach.
69. Principal, Pioneer High School, Broach.
70. Head Master, Sarvajanic High School, Surat.
71. Principal, Tutorial High School, Broach.
72. Mr. Bhagwat, S. R., Poona.
73. Mr. Bhopatkar, L. B., Poona.
74. Prof. Kanitkar, K. R., Poona.
75. Mr. Mukerjee, S. K., Bombay.
76. Mr. Vyas, M. T., Bombay.

APPENDIX No. 5

TABLES OF HEALTH RECORD

TABLE No. 1

Quinquennial Averages of Weights and Heights of Secondary School Boys—

| Age | Bharada New High School, Bombay. |                  |                  |                  |                  |                  | Government High School, Nadiad |                  | N. M. Vidyalaya, Poona |                  | Barnes High School Deolali |                  |
|-----|----------------------------------|------------------|------------------|------------------|------------------|------------------|--------------------------------|------------------|------------------------|------------------|----------------------------|------------------|
|     | 1922 to 1926                     |                  | 1927 to 1931     |                  | 1932 to 1936     |                  | 1933 to 1937                   |                  | 1932 to 1936           |                  | 1934 to 1937*              |                  |
|     | Height in inches                 | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches               | Weight in pounds | Height in inches       | Weight in pounds | Height in inches           | Weight in pounds |
| 12  | 53.2                             | 63               | 53.2             | 63               | 53               | 63.6             | 53.5                           | 64.4             | 54.9                   | 65.6             | 53                         | 71.77            |
| 13  | 55.6                             | 67.8             | 54.8             | 67.8             | 55               | 70.6             | 54.2                           | 74.3             | 56.4                   | 73.2             | 58.9                       | 83.6             |
| 14  | 57.3                             | 75.6             | 56.2             | 74.6             | 57               | 78.2             | 60.6                           | 85.9             | 58.4                   | 79.9             | 59.71                      | 95.6             |
| 15  | 59.3                             | 85.6             | 59               | 83.4             | 59.4             | 85.8             | 61                             | 94.5             | 60.6                   | 87.5             | 62.4                       | 97.5             |
| 16  | 61.2                             | 91.9             | 61               | 92.8             | 61.4             | 95.6             | 62.7                           | 100.6            | 62.2                   | 94.3             | ..                         | ..               |

\*Only four years.

TABLE No. II

The average heights and weights (with clothes) of Bombay Municipal School Children (Boys) belonging to the poor (labouring), the middle (professional) and the upper middle (well-to-do) classes. With this compare Table No. IV

| Age. | 1917-1918        |                  |                  |                  |                  |                  | 1927-1928        |                  |                  |                  |                  |                  | 1937-38          |                  |                  |                  |                  |                  |
|------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|      | Poor             |                  | Middle           |                  | Upper-Middle     |                  | Poor             |                  | Middle           |                  | Upper-Middle     |                  | Poor             |                  | Middle           |                  | Upper-Middle     |                  |
|      | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds |
| 6    | 40.5             | 32               | 41               | 33               | 41               | 34               | 41               | 34               | 41               | 35               | 42               | 35               | 41               | 34               | 42               | 35.6             | 42               | 37               |
| 7    | 42               | 34               | 42               | 37               | 42               | 37               | 42.5             | 35               | 43               | 38               | 44               | 38               | 42               | 37               | 44               | 38               | 44               | 41               |
| 8    | 44               | 38               | 45               | 41               | 45               | 41               | 44.5             | 40               | 45               | 41               | 45               | 41               | 45               | 42               | 47               | 42               | 47.5             | 45               |
| 9    | 46               | 42               | 47               | 45               | 48               | 45               | 48               | 42               | 48               | 42               | 48               | 45               | 48               | 45               | 48               | 45               | 48.5             | 47               |
| 10   | 47.5             | 45               | 49               | 47               | 50               | 40               | 50               | 47               | 50               | 46               | 50               | 48               | 50               | 47               | 50               | 48               | 50.5             | 49               |
| 11   | 51               | 48               | 51               | 50               | 52               | 54               | 51               | 54               | 51               | 52               | 52               | 54               | 52               | 53               | 53               | 55               | 53.5             | 54               |
| 12   | 53               | 52               | 54               | 56               | 54               | 59               | 55               | 55.5             | 54               | 57               | 54               | 58               | 54               | 56               | 54               | 59               | 55               | 60               |

TABLE No. III

The average heights and weights (with clothes) of Bombay Municipal School Children (Girls) belonging to the poor (labouring), the middle (professional) and the upper middle (well-to-do) classes. With this compare Table No. IV

| Age | 1917-1918        |                  |                  |                  |                  |                  | 1927-1928        |                  |                  |                  |                  |                  | 1937-1938        |                  |                  |                  |                  |                  |
|-----|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
|     | Poor             |                  | Middle           |                  | Upper-Middle     |                  | Poor             |                  | Middle           |                  | Upper-Middle     |                  | Poor             |                  | Middle           |                  | Upper-Middle     |                  |
|     | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds | Height in inches | Weight in pounds |
| 0   | 41.5             | 34               | 42               | 35               | 41               | 33               | 41.5             | 32               | 41               | 33               | 41.5             | 35               | 42               | 34               | 42               | 35               | 42               | 35.5             |
| 7   | 43               | 36               | 43               | 36               | 42               | 30               | 43               | 36               | 43               | 37               | 43               | 30               | 43               | 37               | 43               | 37.5             | 44               | 38               |
| 8   | 45               | 37               | 45               | 39               | 44.5             | 10               | 45               | 41               | 45               | 40               | 45               | 42               | 45.5             | 40               | 46               | 41.5             | 46               | 40               |
| 9   | 47               | 40               | 48               | 44               | 48               | 44               | 48               | 44               | 47               | 42               | 47               | 45               | 48               | 44               | 47               | 45               | 48               | 45               |
| 10  | 49               | 44               | 49               | 48               | 49               | 47               | 50               | 48               | 51               | 48               | 49               | 48               | 50               | 52               | 50               | 51               | 50               | 48               |
| 11  | 51               | 54               | 52               | 54               | 51               | 55               | 52               | 54               | 52               | 53               | 51               | 53               | 51.5             | 55               | 52               | 53               | 52               | 54               |
| 12  | 52.5             | 56               | 52.5             | 56               | 52               | 57               | 54               | 60               | 54               | 57               | 53               | 60               | 53.5             | 57               | 53.5             | 62               | 54               | 61               |



TABLE No. IV

*The average heights and weights (with clothes) of the School Children in New York in 1936*

| Age   | Boys              |                   | Girls             |                   |
|-------|-------------------|-------------------|-------------------|-------------------|
|       | Heights in Inches | Weights in pounds | Heights in Inches | Weights in pounds |
| 6 ..  | 43·8              | 45·2              | 43·4              | 43·3              |
| 7 ..  | 45·7              | 49·1              | 45·5              | 47·5              |
| 8 ..  | 47·8              | 53·9              | 47·6              | 52·0              |
| 9 ..  | 49·7              | 59·2              | 49·4              | 57·1              |
| 10 .. | 51·7              | 65·3              | 51·3              | 62·4              |
| 11 .. | 53·3              | 70·2              | 53·4              | 68·8              |
| 12 .. | 55·1              | 76·9              | 55·9              | 78·3              |

TABLE No. V

*Percentages of Primary School Children in Bombay Affected by Various Diseases During the Last Twenty Years*

| Names of Diseases                       | 1919 | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1936-1937 |
|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|
|   | 1920 | 1921 | 1922 | 1923 | 1924 | 1925 | 1926 | 1927 | 1928 | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 | 1936 | 1937 |           |
| Malnutrition and general debility .. .. | 40   | 38   | 40   | 34   | 28   | 30   | 32   | 29   | 28   | 19   | 18   | 17   | 16   | 17   | 16   | 20   | 20   | 17   |           |
| Decayed Teeth .. ..                     | 29   | 27   | 33   | 30   | 29   | 31   | 19   | 28   | 27   | 19   | 16   | 18   | 14   | 26   | 24   | 24   | 22   | 29   |           |
| Diseases of Ear, Nose, Throat .. ..     | 29   | 25   | 21   | 17   | 16   | 18   | 15   | 11   | 10   | 10   | 8    | 8    | 7    | 12   | 11   | 10   | 9    | 11   |           |
| Diseases of Eyes .. ..                  | 29   | 29   | 31   | 28   | 23   | 10   | 14   | 13   | 11   | 8    | 0    | 7    | 5    | 3    | 4    | 4    | 5    | 3    |           |
| Diseases of Lungs .. ..                 | 5    | 5    | 5    | 5    | 4    | 8    | 6    | 6    | 5    | 5½   | 4½   | 4    | 3    | 2½   | 2    | 2    | 2    | 2    |           |
| Diseases of Skin .. ..                  | 9    | 9    | 6    | 5    | 5    | 5    | 4    | 4½   | 5    | 6    | 6    | 5    | 4    | 2    | 3    | 4    | 3    | 2    |           |
| Enlarged Spleen .. ..                   | 5    | 5    | 6    | 8    | 7    | 9    | 8    | 7    | 6    | 7    | 8    | 6    | 4    | 3    | 3    | 2    | 1½   |      |           |

BOMBAY : PRINTED AT THE GOVERNMENT CENTRAL PRESS.