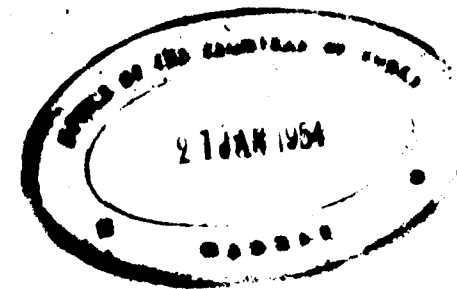


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Mr. J. P. Thomas, B.A., L.T., M.Ed., D.P.Ed.

Management : The Alumni Association of the Y. M. C. A. College of Physical Education, Saidapet, Madras.

Editor : Mr. C. C. Abraham, Principal, Y. M. C. A. College of Physical Education.

Business Manager : Mr. J. P. Thomas, Y. M. C. A. College of Physical Education, Saidapet, Madras, 15.

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EDITORIALS

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Report on Health and Physical Education by the Secondary Education Commission

IN this issue we are publishing in full the Chapter entitled “The Physical Welfare of Students” as given in the report of the Secondary Education Commission, appointed by the Government of India. The problem of Health Education and Physical Education are discussed in this chapter. A study of the report shows that in addition to these, the Commission refers to Health Education and Physical Education in various other parts of the report. We are glad the Commission has given such special emphasis to these two important aspects of secondary education.

IN our opinion, this Report is a philosophic presentation of what may be done in the field of secondary education. It will be a blue print on secondary education for the next 25 years. It provides the skeleton for secondary education. Details have to be filled in as we progress. A significant feature of the report is that for the first time in a report of this kind, the aims and objectives of secondary education have been definitely stated.

IN this connection, we would like to point out that the aim of Physical Education is identical with that of secondary education, viz., the development of physically, mentally, emotionally and socially fit citizens. In Physical Education, we try to achieve this aim through the medium of physical activities which are specially selected for this purpose. Our immediate objectives are the development of organic fitness, neuro-muscular skills, character and personality, democratic relationship, patriotism and loyalty.

WE understand the main object of this new scheme of secondary education is to provide a pattern of ‘complete education’ for majority of our boys and girls. If that is so, it is imperative that we should immediately put into practice the recommendations of the Commission with reference to a comprehensive programme of Health and Physical Education in our secondary schools. Such a programme should have as its foundation

a thorough knowledge of the human body, its parts, how the parts work, the needs of the body particularly nutrition and ways of protecting the body against the common enemies of man. They should experience in their school life that taking part in vigorous physical activities daily will improve their physical fitness and develop in them coordination of mind and body and also the ability to get along well with others and be happy.

[T must also be possible to create in them wholesome attitudes towards play, recreation and also towards the community in which they belong. A sense of belonging must also be developed in our boys and girls. The Health and Physical Education programme should be so planned that boys and girls in our secondary schools will not only be able to take care of themselves from the health and physical fitness point of view but will also be able to look after their own children later in an intelligent way.

THE big complaint against the present system of education in India is that it is all memory education, and not related to actual life. Health and Physical Education must therefore find a very important place if secondary education is to provide 'complete education' for our boys and girls.

THE recommendations made in the report with reference to Health

Education in schools should be given immediate consideration. We have stressed in these columns the need for Health Education in our schools for over 25 years. It is high time that we take a realistic view in this matter. There is rapid deterioration in physical and mental standards both in the school and the college. This is definitely due to lack of physical fitness. To make Health Education really effective, we will need in India a School Medical Service in each State. The School Medical Service will consist of School Doctors, Nurses, Dentists and Psychiatrists who are specially trained to meet the health problems in a school situation. So far, we have made no beginning in this direction in any of our States although the report claims that a scheme has been formulated in one of our States. Health is a vital need for our school going population. We feel that any such scheme without adequately trained School Doctors, Nurses, Dentists and Psychiatrists to meet the school health problems adequately, will be a failure. What we should therefore do is to begin the training of School Medical Service personnel, in our Medical Colleges. The Government of India and the Indian Medical Association should take up this matter with the Universities or other Agencies training Doctors, Nurses and Dentists.

WITH reference to the programme of Physical Education in secondary

schools, the report recommends that if possible the physical activities should be made to suit the individual and his capacity for physical endurance. This again will be possible only if there is a thorough physical and medical check up of every pupil in the school. Only then, would it be possible to classify pupils and prescribe physical activities. We agree that there will be a number of secondary school boys and girls who will be declared medically unfit for exercises and several others prescribed only restricted activities, but the majority would be found to be physically fit who should be provided with an adequate programme of Physical Education.

THE real problem the secondary schools are facing today is lack of adequately trained teachers of Physical Education. To achieve the aims and objectives of Physical Education as already stated before, we will need adequately educated and trained leaders in the field of Physical Education.

WE have been stressing in these columns that the Director of Physical Education in the secondary school should be a graduate. We are not in favour of entrusting Physical Education in secondary schools to Physical Education teachers whose minimum education is only S.S.L.C passed as is recommended in the report. We

know from our own experience of 25 years the limitations of such teachers. Physical Education is also education through the physical and it is for this reason that we have been recommending a graduate trained Physical Education teacher for secondary schools. There will be much for him to do in influencing the pupils the right way and in building their character and personality and mould them into democratic citizens. We are really surprised that the report has missed this point altogether.

THE proposal that ordinary school teachers under training should receive a certain amount of instruction in Physical Education should receive consideration. One or two trained Physical Education teachers will be too inadequate for a secondary school. The cooperation of the classroom teacher is therefore indispensable in this field. With some training in Physical Education, the ordinary classroom teacher will be in a position to cooperate in an intelligent way. A suitable curriculum in Health and Physical Education should therefore be introduced in our institutions where teachers for secondary schools are trained.

THE report makes only a casual reference to a two years training. We have been stressing in this column that there is need for a higher type of personnel in India today. They are

required as Directors or Inspectors of Physical Education, as Principals, Vice-Principals and Lecturers of Physical Education Colleges that are coming up rapidly, as University Physical Directors and Directors of Physical Education of large colleges. There is also a need for a higher type of personnel in the field of Recreation and Youth Welfare Work. We strongly feel that a two years course must be instituted in few of our Physical Education Colleges in India and they become Degree Courses recognised and approved by the Universities concerned. It is high time that Universities in India recognise Physical Education as a profession based on scientific facts and principles.

IN our opinion, this report has come at a right time and has some very valuable suggestions to offer to better secondary education in our country. We are glad that the commission has given special emphasis to Health Education and Physical Education. But one thing we would like to point out in particular. However good a scheme may be and the suggestions put forward, the fact remains that unless we improve the lot of the teacher, the secondary education will remain what it is today. The laudable aims and objectives to develop the democratic citizen and make him physically, mentally and socially fit will never be achieved without raising the status of the present teacher.

WE therefore appeal to the Central and State Governments to take the necessary steps to better the lot of our teachers. Half the battle would be won if we are able to create in the minds of our teachers that they are important people in the community and their services are well appreciated in terms of their salary and their status. If we could provide these to the teachers, we could then think in terms of a better generation of children.

Dr. Nash in India

WE are happy indeed that Dr. Jay B. Nash, Chairman of the Department of Physical Education and Health, School of Education, New York University, is now in India as a Fulbright Professor. He has been specially invited by the Government of India to advise the various Governments, Universities, Municipalities etc. on what may be done in the field of Health, Physical Education and Recreation. It is good that the Government of India has invited a man of Dr. Nash's eminence.

DR. Nash is one of the foremost leaders in the field of Health, Physical Education and Recreation in the United States of America. He has been the Chairman of the Department of Physical Education and Health,

School of Education, New York University, from 1930 and in this capacity he has trained thousands of leaders in various fields, particularly in the field of Physical Education. He has also been Chairman of several National Organisations including the American Association for Health, Physical Education and Recreation, Chairman of the Department of School Health and Physical Education, National Education Association and a Member of the Joint Health Committee of the American Education Association and American Medical Association.

DR. Nash is the author of some 15 books in the field of Physical Education, Health and Recreation. He is also known as a world traveller and lecturer. He has on several occasions visited the youth organisations of countries in Europe and Asia. His writings and teachers has influenced the Physical Education the world over. We particularly draw the attention of our reader to his article "The Law of use" published in this issue.

DR. Nash is coming to India at the right time. His approach to Physical Education is that of an Educator. He sees in Physical Education an opportunity for children to use their hands and their brain for learning skills of a varied nature including the skills of physical education, music, art, painting, sculpturing, wood work,

weaving, hiking, camping etc. Physical Education, according to Dr. Nash, has suffered a lot because of the term 'physical'. Education through the physical is very little understood in India.

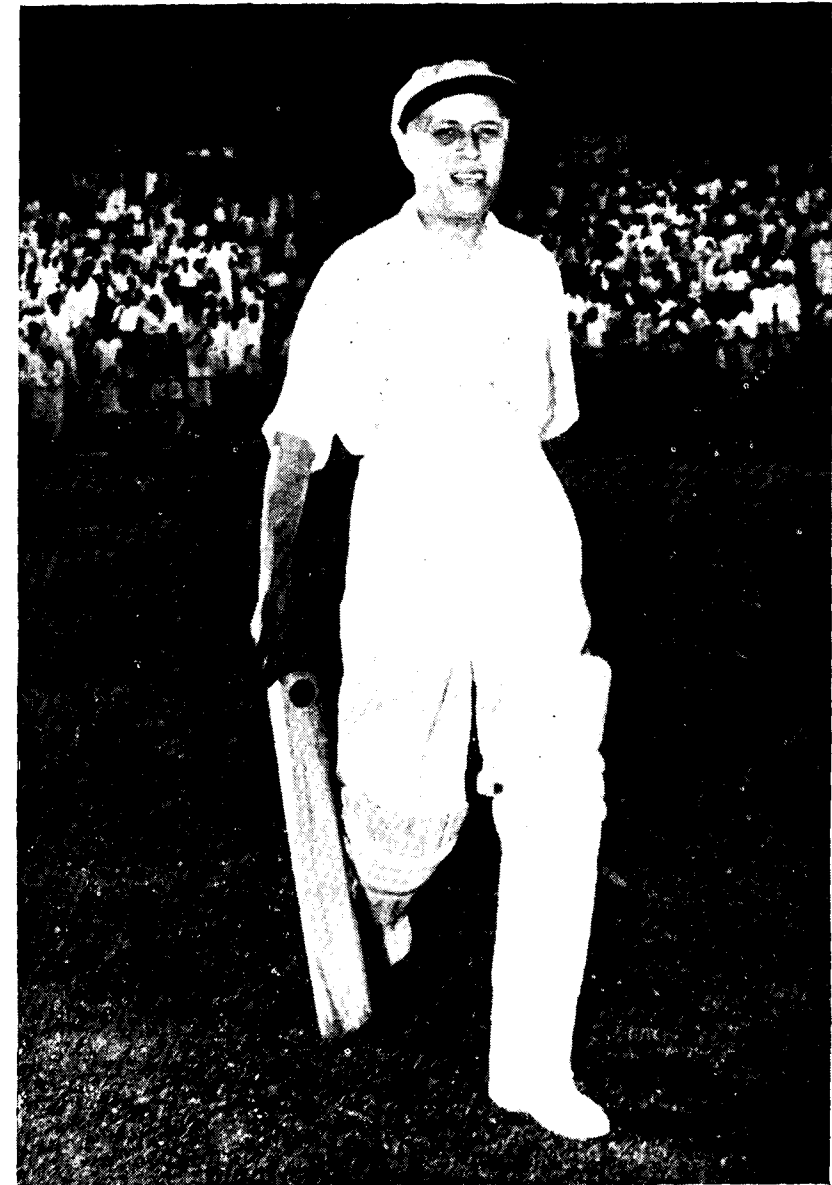
THE objectives of Physical Education, according to Dr. Nash, are the development of organic fitness, neuromuscular skills, interpretive thinking and emotional balance. Learning to play within the rules of a game will also help a child to obey the laws of the State. Physical Education has therefore a very important part to play in a democratic society.

DR. Nash is now touring India, meeting people in the field of Education, giving lectures and holding seminars for students in training institutions, particularly Physical Education Colleges, and also Teacher Training Institutions. He has also been holding seminars for Inspectors of Physical Education and Physical Education teachers in colleges and schools. He has also been giving a series of lectures in our Universities. We feel quite sure Dr. Nash's interpretations on the aims and objectives of Physical Education will be understood in their true perspective and steps will be taken to place Physical Education in its rightful place in all our educational institutions from the Elementary Schools to the University.

WE take this opportunity to thank the United States Educational Foundation in India in bringing out Dr. Nash. He has been keeping himself happily busy wherever he has been in India. He has become a good friend of the Indian people, particularly of those who are working in the field of Physical Education. It is our hope that a few more men of Dr. Nash's eminence will come to India regularly. Dr. Nash's visit has immensely helped us. To him we owe a deep debt of gratitude.

This Issue
A Double Number
September 1953
&
January 1954

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SKIPPER NEHRU
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The Law of Use

By Dr. Jay B. Nash,

New York University - Fullbright Professor in India.

Physical Education and Physical Medicine rests firmly on the application of The Law of Use. Physical Medicine is in reality Physical Re Education, says one of the great medical men of the day. That which is used develops is applicable to physiology but also in the social and the moral and religious fields. If one wants a trait to grow and develop, make use of it, express it and whether it is good or bad, it will increase.

The Law of Use:

It is a law in biology that function and use go hand-in-hand. It is recognized not only in biology but also in psychology and more recently, in human relationships. In biology increased metabolism is recognized as resulting from muscular exercise. The psychological principle of "that which you learn, you must practice," and "practice makes perfect," are acknowledged. On the human relations side, it is admitted that the way "to hate people is to hate them." You become efficient in that which you practice.

The law of use is applicable in physiology. The muscles of the extremities and the heart gain in strength and size through use. A muscle which is given too much rest, atrophies, because the law of use has its reverse side—that which is not used, retrogrades. It is recognized that children suffering from cardiac disorders may be allowed to take

mild dosages of exercise. Convalescent patients are permitted to stand on their feet sooner than in former years.

Doctors specializing in Physical Medicine are concerned about the role of rest in the recovery process. Rest, if abused may even become a danger, affecting in particular the circulatory and the respiratory systems. In the whole training procedure, the body tends to adjust itself to new conditions and emergencies. It adjusts itself to meet needs and thereby builds power. Karpovich indicates that patients convalescing from rheumatic fever can safely participate in a graded system of physical exercises within two weeks after clinical cessation of the pathological systemic action.

Ghormley¹ points out that orthopaedic surgeons, realizing the detrimental effect of complete rest in bed, have over the years succeeded in shortening the period of such confinement.

Deaver and Brown² state that children and adults suffering from infantile paralysis or cerebral palsy have but one hope of improvement, namely use. Patients must get on their feet and try to use their muscles.

F. H. Krusen³ summarizes the opinions of doctors Howard A. Rusk, William Dock and others and say "should we not give more attention to the extreme importance of providing

1. Ralph K. Ghormley, The abuse of Rest in Bed in Orthopedic Surgery. Journal of the American Medical Association, August 19, 1944. pp. 1085-1087.

2. George G. Deaver and M. E. Brown, Making Man Power; Vocational Rehabilitation of Those Handicapped by Cerebral Palsy. Archives of Physical Therapy, December 1942 pp. 719-728.

3. F. H. Krusen, The Abuse of Rest in Psychiatry, Journal of the American Medical Association, August 1944, pp. 1087-1090.

early graded physical and mental activity for our patients? I believe that we should."

Adding a little to a little, in applying the law of use, is an essential principle. The essence of training is "a little today, a little more tomorrow." The principle is the same for the crippled child trying to walk and for the athlete preparing to break a world's record. Christensen⁴ states that the essential point is to increase the demand on the organism steadily but not too rapidly.

The law of use supplements the contention that education is a doing process; it is an activity phenomenon. In order to approach excellency, one must get into action. Over one of the gates to the Greek palaestrae was the motto, "Strip or retire," a challenge to every boy entering. Strip—be a contestant, get into action, perform or retire. In a much more significant sense, the same principle of action holds for nations and for civilisation as a whole. One of the principle contentions of world historians is that there must be challenge. Without it, man slips back into complacency. With challenge, he achieves. Civilization itself was made possible by man being kicked into activity by an hostile environment. Hostility lays the foundation for use and becomes one of the basic elements in training.

The Law of Use has applications for the resistance to fatigue. During a training season an individual acquires the ability to hold fatigue at arms length. He acquires the ability through skillful action to create less fatigue products and at the same time to deliver more oxygen to the working muscles.

It is an interesting thing to note that the happy man can do much more work with less fatigue than the man who hates his work.

4. E. Hohun Christensen, A Krogh and J. Lindhard, Investigations on Heavy Muscular work. Quarterly Bulletin of the Health Organisations of the League of Nations, Volume III, Extract No. 13.

Therefore exercise should be enjoyed. If there is a motive and the individual can have fun, fatigue can be held off.

Fatigue:

The problem of fatigue is closely related to the amount of work done and to the rate at which it is performed.

What is known about fatigue?

The presence of fatigue is easily recognized by everyone. What causes fatigue, where it is resident in the human organism, how long it takes to recover and other important questions are very difficult to answer. Fatigue is the final result of activities, showing itself in a diminished capacity for work. Stated in another way, fatigue is a feeling of general discomfort and less readiness to perform work. The period of contraction of the muscle is prolonged and the frequency of contraction is slowed down. As Zoethout and Tuttle write form laboratory tests: ".....the muscle fails to respond even to the strongest stimulation that can be applied; in other words, the muscle gradually loses its irritability, and to this condition the term fatigue has been applied. Dill says,

".....the capacity of the muscle has been overtaxed and the processes of restoration have not kept pace with the process of breakdown."

There is controversy as to the source of fatigue. Formerly it was thought that this was in the muscle itself, since a fatigued muscle could be bathed in an alkaline substance and have its irritability restored. Today however, it is believed that the first site of fatigue is in the central nervous system at the junction between the neurons. The second site, and the one most susceptible to fatigue, is the myoneural junction or motor endplate—the junction between the nerve and the muscle

fibres. Zoethout and Tuttle state that in as-much as ".....a nerve fibre is practically incapable of experiencing fatigue.....we must conclude, therefore, that the fatigued structures are the myoneural junctions."

Fatigue factors:

No one cause of fatigue can be segregated, since there are many conditions and probably many sources contributing to the final result. However, four factors will be discussed in popular terms, namely, "physical" fatigue, "mental" fatigue, "emotional" fatigue and boredom.

Physical fatigue:

Physical fatigue refers to a type which may be called outdoor tiredness. It is the fatigue which comes to the man who has been engaged in manual labour, in gardening or in an afternoon of tennis. Such fatigue may be recognized by a very pleasant sense of let-down. The man is perfectly content to rest. Sleep comes naturally and it is sound. Exercise has not been carried to the point of exhaustion nor have there been any great emotional strains. The natural antidote for this physical fatigue is sleep and with it the individual is restored. He is ready for another day.

Mental fatigue:

Mental fatigue is that type of fatigue which comes from confusion. It results when a man is unable to finish one task and must leave numerous others hanging in the air. It is augmented by the presence of people, noise and irritating lights. It is often the fatigue of the office worker and the business man who has been problem-solving, without finding the answers. This is referred to as a condition where one is less willing rather than less able. Ivy writes, "It is well known that the block in fatigue evidenced in maximum voluntary muscular effort is located in the central nervous system and not in the muscle. We recognize this fatigue in tenseness, irritability,

jumpiness." Alavertz, in studying the blood pressure of six thousand prisoners and four hundred prison guards calls attention to the fact that blood pressures of prison guards are considerably higher than those of prisoners. The conclusion might be that the prison guards have much more to worry about than the prisoners.

With this fatigue the individual becomes sluggish and often-times peevish. He claims he is nervously exhausted. There is an actual running-down of body processes. The end result is that the man is no longer capable of work or concentration but he is not incapable of activity. The busy business man is subjected this type of fatigue. The antidote for it is sleep but not immediately. If the man attempts to go to sleep, his mental mechanism keeps racing on, he is re-living his day, trying to solve problems; he worries, frets and is tense. Many times his muscles ache. He wants to go places, to do things but does not know what to do. Very many times such tenseness leads to drinking and other forms of dissipation which, in turn, make him less efficient to face the following day.

The immediate antidote for this mental fatigue is recreation. If the individual can let down, can engage in some type of activity which is interesting and lose himself in it, normality may be restored in a very short time. Recreation may take the form of some mild sport or game, painting, working with a lathe, reading a book or cooking.

The individual must like to do the activity and must be able to lose himself in it. An activity involving the hands is usually more desirable. Tilney contends that men cannot achieve normality nor maintain normality without having some accomplishment with the hand. The Jennings law of attention is effective in this instance. The body will attend to one thing at a time. When one is engrossed in some interesting activity, the

worry; tenseness, confusion and, sometimes, much fatigue vanish. Tillisch and Walsh, from the training of test pilots conclude:

The importance of hobbies in securing mental relaxation should be emphasized, and a pilot should be encouraged to cultivate some. The most satisfactory hobbies are those which are not related to one's everyday occupation and which involve making something with the hands or forming collections, so that a person can enjoy the feeling that he has created something worth having. The indiscriminate use of sedative agents by pilots in an effort to dissipate nervous tension cannot be condemned too strongly.

Several things can be done to prevent a state of chronic exhaustion. Good physical condition should be assured by frequent medical examinations and correction of defects. At least eight hours of sleep a night should be obtained. A pilot should keep himself in good physical condition by regular exercise.

Emotional fatigue:

When either of the above types of fatigue is augmented by high emotional states, fatigue is felt rapidly. Unless physical fatigue is carried to the point of exhaustion or unless mental fatigue is accompanied by severe emotional strain, there is little evidence that either a neurosis or a psychosis follows. In other words, little harm will be done by the first two types of fatigue. However, when these are increased by high emotions, the damage which often results may become permanent. In an emotional state, an individual is often highly adrenalized. In its worst form, it was known as "shell shock" in World War I and as "combat fatigue" in World War II. Many "fatigued" veterans from both wars are chronic hospital cases today.

Herein lies one of the dangers of highly emotionalized athletics on the college or on the high school level. It may likely be the spectators rather than the players who will feel fatigue from these contests. The players

quickly burn up excessive blood sugar. They get into action but the spectators have nothing to do. The organism is stripped for action, fight or flight, but it must sit. After high emotional experiences of this type in athletics or after periods of great fear or sorrow, there must be a restoration of normality. Even sleep is deferred until a degree of normality is attained. Such restoration can come from a recreational type of activity discussed above. As soon as individual can get into action and can do things, body balances are restored. After this, sleep will come.

Boredom:

The human organism has strange extremes of responses. Fatigue may come from too much and too rapid activity and also, from too little. Boredom or idleness is definitely recognized as fatigue. Boredom may arise from monotonous types of work in which the individual is not the slightest bit interested, or it may come from having nothing interesting to do. In boring situations, there is not enough adrenalization, there is no enthusiasm-provoking interest, the body is not stepped up to the activity level. The individual really feels tired. As an antidote to this fatigue, he should indulge in not less but more activity. The answer is—get into action—do something in which you are interested—get on to your feet in the morning—"get going." Unless an individual has something for which he must get up, he oftentimes just does not get up, claiming fatigue; but, once up, within a very short time body normality is restored and he is no longer tired. One conclusion, certainly, is that many children who seem tense and jumpy, who have a tendency to be highly emotional or irritable, need more activity—not less. They need more activity of the total-body-rhythmic type—running, jumping and balancing. They need more games in which they can become vitally interested. In this

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type of activity, a sense of normality is restored, a sense of pleasant tiredness results and sleep, the great restorer, comes naturally.

use the more enjoyment and the more benefit.

In the area of human relationships the Law of Use applies. Physical education has responsibilities here also. In friendly sports and games with people all over the world a spirit of friendliness and brotherliness can grow and develop. The Law of Use therefore is not just a law of physiology but a moral and a spiritual one.

Beyond mere physical power, physical education has opportunities to teach skills—skills to relax and hold off fatigue but skills also for the basis of recreation habits. The Law of Use again applies here—the more

*Education Must be Emotionalized.**

Discussing this topic, Dr. Nash narrates the Greek Technique as follows:

The young men of Athens in a highly emotionalized ceremony took an oath which inducted them into the group. After this, they belonged; they took responsibility. This oath has lived on. It is as follows:

We will never bring disgrace to this our city by any act of dishonesty or cowardice, nor ever desert our suffering comrades in the ranks. We will fight for the ideals and sacred things of the city, both alone and with many; we will revere and obey the city laws and do our best to incite a like respect and reverence in those above us who are prone to annual or set them at naught; we will strive unceasingly to quicken the public sense of civic duty. Thus in all these ways we will transmit this city not less but greater, better and more beautiful than it was transmitted to us.

**Physical Education: Interpretations and Objectives*

Dr. Jay B. Nash (Page 36)

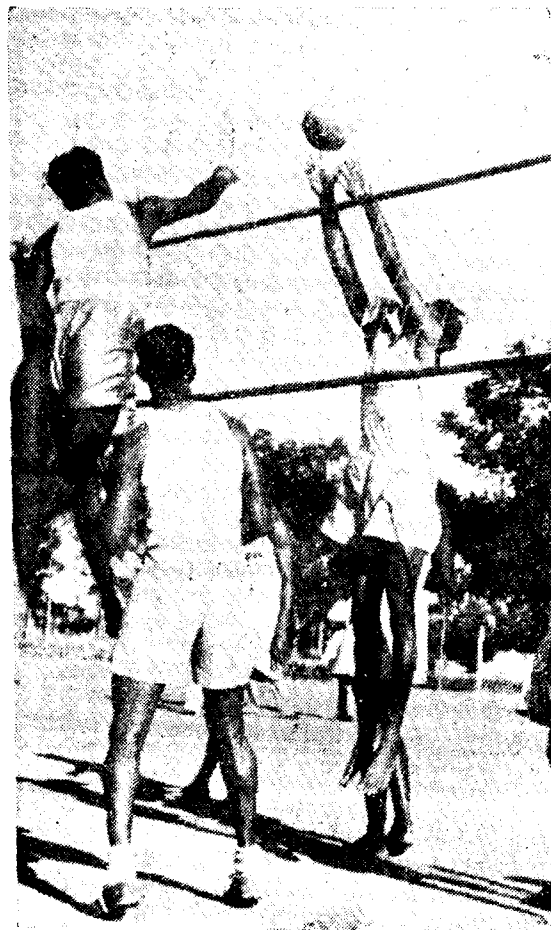
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SAIDAPET

MADRAS-15

Report of the Secondary Education Commission The Physical Welfare of Students

Importance of Physical and Health Education

The physical welfare of the youth of the country should be one of the main concerns of the State, and any departure from the normal standards of physical well-being at this period of life may have serious consequences - it might promote disease or render the individual more easily susceptible to certain diseases. In many countries, particularly during the two world wars, an examination of young men recruited for war service revealed a disproportionately large number who were unfit for such work. In India even among those persons who were recruited on a voluntary basis, it was noted that quite a large number of them were physically unfit for military service. It would not be an exaggeration to say that, if the whole of the population at the particular age period at which recruitment takes place had been subject to a similar examination, the proportion of the unfit would have been higher than in any other country. Physical fitness and health education, therefore, assume an importance that no State can afford to neglect.

It is often stated that the proper care of health and sound physical education require an expenditure that may not be within the reach of the State Government. It is unfortunate that a long range view has not been taken in this matter. To allow the youth to suffer from physical handicaps and thus to fall a victim to diseases and to allow incipient diseases to lie dormant and then develop, is to increase the number that would require hospital treatment. Such an approach naturally swells the medical budget of the country. Apart from this aspect, it has to be recognized

that the increase in the number of physically handicapped people and those of low health level means an increase in the number of those with diminished economic value and efficiency. The earning capacity of such individuals being seriously diminished, it becomes an economic drain on the resources of the country to support them and their families. If both these points are taken into consideration, it will be seen that economising in health education and physical welfare is unsound economy because the State has to spend much more on medical services than it would under properly organised schemes of physical and health education.

HEALTH EDUCATION

From what has been stated, it must be clear that unless physical education is accepted as an integral part of education, and the educational authorities recognise its need in all schools, the youth of the country, which form its most valuable asset, will never be able to pull their full weight in national welfare. The emphasis so far has been more on the academic type of education without proper consideration being given to physical welfare and the maintenance of proper standards of health of the pupils.

Measures to be adopted

We shall now refer to some considerations that may be borne in mind in regard to health education. Every student in the school require to be trained in sound health habits both at school and at home. The instruction should be practical so that he may not only appreciate the value of health education but also learn the ways in which he can effectively maintain and improve his health. This is essential not only for physical reasons but because sound mental health depends on good

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physical health. It should therefore be a responsibility of all schools to see that their children keep healthy so that they can get the maximum benefit possible from their education.

Medical Examination

It is necessary for this purpose, to subject all students to a medical examination, to ascertain whether they are normal in health and standards of physical development. Although the system of school medical inspection has been in existence for a number of years in many States, we are of the opinion that the results have not been satisfactory for the following reasons:—

- i. The medical inspection has been done in a perfunctory manner.
- ii. The defects that have been brought out even by this type of examination have not been remedied because the remedial measures suggested are often not carried out.
- iii. There is no follow-up, not even in the case of those who have been declared as defective.
- iv. Effective co-operation has not been established between the school authorities and the parents, and either through ignorance or through lack of financial resources or both, the parents have taken little interest in the reports of the school medical officers.

We feel therefore that unless the present system is improved considerably, it would be a mere waste of time and money to continue it. To bring about necessary improvements, we recommend that:

- i. Health examination should be thorough and complete. If a choice is to be made between frequent and cursory examinations and more thorough examinations at longer intervals, the latter

are greatly to be preferred. Every pupil in the school should undergo at least one complete examination, every year while in school, and one just prior to leaving the school.

- ii. Pupils with serious defects and those who suffer from severe illnesses should be examined more frequently.
- iii. Much more should be done to assure prompt and effective follow-up whenever examinations reveal the need for corrective or remedial measures.
- iv. One copy of the health report should be kept by the school medical officer, another copy should go to the parent and a third copy to the teacher in charge of a particular group of students. This copy should be kept as part of the personal record of the pupil and on this should be based the programme for his health instruction and physical education. It should be the duty of the school physician to study the reports of health examinations and to select those cases for which remedial or corrective treatment is indicated. Thus the health and safety of students will become an important concern of the entire school and activities for promoting and safeguarding health will find a place throughout the school programme.

School Health Service and the Community

We have stated at another place that the whole concept of the duties of the school needs to be enlarged, by including in it various forms of fruitful co-operation with the community. There are various fields in which the school can serve the community, and various fields in which the community can co-operate with the school. It is important to remember that in regard to the health and the care of the children, the activities of the school should be extended to their homes

and neighbourhood and to the village or city as a whole. The reason for this is obvious. The health of the school children is determined not only during the hours spent at school but even more so during the time spent at home and in the neighbourhood of the home and at work. If the school neglects the home and community factors, these out-of-school influences may prevent or cancel many of the beneficial effects of the school's endeavour to improve the health of the child. It is not suggested that schools can directly control the conditions outside, but they can influence them by educating both the pupils and their parents, by co-operating with the physicians and the health authorities of the city or village, and by educating the public to a better appreciation of its health problems and a better recognition of what they can themselves do to improve health conditions. We may go further and say that if the school could actually do something to improve the conditions of sanitation in a small, selected locality, it would be the best health education for both pupils and parents and, in fact, the whole community. In this endeavour, the health authorities of the locality should give their active co-operation and assistance to the school. This would also be a very good method of promoting the idea of the dignity of labour in the children.

This approach to the maintenance of school children's health may appear impracticable at first sight. But a clearer appreciation of the factors involved and a better co-ordination of the agencies concerned with the promotion of health will show that the adopting of such measure can produce tangible results within a reasonable time.

The role of teachers

We have stated that there should be a systematic follow-up and that active methods should be adopted to afford the full benefits

of medical treatment for such students as need it. In regard to the health of school children, it is necessary to realise that it is the teacher who can detect at a very early stage any deviation from the normal, such as defective vision, postural defects, deficient hearing, etc. because he is in constant contact with the child. We have therefore emphasized in the Chapter on Teacher-Training that training in first aid and fundamental principles of health as well as the detection of deviations from normal standards should form a part of the instruction prescribed for all teachers in Training Colleges. If such training is given in the first principles of health maintenance, teachers can play a valuable part in bringing to the notice of the school medical officer or other authorities concerned any cases of deviation from the normal at a fairly early stage.

Medical Examination of Children in Hospitals

A scheme has been formulated in one of the States, whereby in those areas where well equipped hospitals are situated, the school children may get the benefit of attention from the specialists of the hospitals. In cases where defects have been noted and medical treatment is required, the children may be taken in groups by the teacher, the school medical officer or the physical director to the hospital concerned on one or two afternoons in the week, when the staff will look after them. It has been suggested that the whole afternoon may be reserved for this purpose. In this way a team of medical officers, who are specialists in such branches as Ophthalmology, Ear, Nose and Throat, Chest diseases etc., together with a physician would be responsible for taking note of the physical defects and ailments of children and getting them suitably treated. Children who require more frequent visits may be advised to attend such afternoon sessions or they may be told the remedial measure which the escorting teacher should

see are duly carried out. In view of the paucity of trained personnel and the limited number of hospitals equipped for this purpose, it will not however be possible to extend such a scheme over the whole State.

There is reason to believe that, owing to overcrowding and other insanitary conditions of city life, the health of school children suffers much more in urban than in rural areas. At present the opportunities for school children to be taken to well-equipped hospitals are greater in urban areas than in the rural areas. It is suggested, therefore, that to begin with, the school-population of the urban areas may be given the benefit of the scheme and the progress in its working should be watched. It is not by any means implied that the rural children should be neglected. Wherever such defects are noticed in them, it must be ensured that they also get the benefit of proper medical care at the institution situated in the neighbouring towns or cities. They should be taken to the institutions concerned or the medical staff may visit such schools on definite days, arranging mobile hospital ambulances for the purpose. In any case such remedial measures as the school medical officer may suggest should be adopted, and the school authorities should see that they are carried out.

One of the important factors leading to many defects in health is malnutrition. At no period of life does malnutrition play such a large part in causing ill-health, or in promoting defects of growth as in the period of adolescence. Very little is being done at present in educational institutions to see to the proper nutrition of children. We recommend that, in residential schools and hostels, balanced diets suited to different ages should be prescribed by nutrition experts and managements be advised about proper standards for children's diet.

Physical Education

The concept of Physical Education

We have dealt with health education first because the success of physical education depends upon the health of the student. It is an indispensable part of all health programmes. Its various activities should be so planned as to develop the physical and mental health of the students, cultivate recreational interests and skills and promote the spirit of team work, sportsmanship and respect for others. Physical education is, therefore, much more than mere drill or a series of regulated exercises. It includes all forms of physical activities and games which promote the development of the body and mind.

If it is to be given properly, teachers of physical education should evolve a comprehensive plan to be followed by the students and it should be based on the results of the health examination. Most of these activities are group activities, but they should be made to suit the individual as well, taking due note of his capacity for physical endurance. Physical education, group games and individual physical exercises should be given, no doubt, in the school under the supervision of the Director of Physical Education, but there is one aspect of physical education which should not be forgotten. As in the case of health education, the school should "go to the community" and seek its assistance in the furtherance of the programme of physical education. There are various types of physical exercises that can be taken up by students, with necessary aptitudes outside the school under the auspices of other agencies in the community interested in physical education, e.g., swimming, boating, hiking and group games that may be locally popular. Where such facilities are available, special arrangements should be made for school

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children to avail of them under proper guidance and special hours may be fixed for them in some cases e.g. in swimming baths and Akhadas etc.

Teachers and Physical Education

It has been noted that physical education is generally considered to be the exclusive responsibility of the teacher for physical education. So long as the other teachers of the school do not participate in this matter along with the physical instructor, physical education will not be a success. That is why we have recommended elsewhere that the teachers under training should receive a certain amount of instruction in physical education, while specialists will of course be trained in special institutions. We recommend that all teachers or at least those below the age of 40 should actively participate in many of the activities of physical education and thus make it living part of the total school programme instead of being a side issue entrusted to an isolated member of the staff.

We place special value on group games as they help to mould the character of the students in addition to affording recreational facilities and contributing of their physical well being. There is one aspect of group games to which we should like to draw attention. Competitive group games between different schools and regions have come to stay and they no doubt increase interest in group games. One defect which is often associated with them has however to be guarded against. In order to prepare teams for competitive matches the playing fields are often utilised mainly by the few students who are selected for the school teams, while the majority are content to watch them passively. To develop the health of the school community, it is far more important that the majority of the students should utilise the playing fields than that a small minority should do so for the sake of winning tournaments and bringing a kind of profes-

sional credit to the school. The growth of this tendency towards a kind of professionalism in school sports must be carefully resisted.

We have recommended the maintenance of school records for all students, and would like to add here that these should include a full record of all activities in the field.

Training of Physical Education Teachers

Some of the States have established Colleges of Physical Education where training is given for about a year to candidates possessing certain prescribed qualifications. We are of the opinion that the training should be comprehensive including all aspects like health education, first-aid, nutrition etc. It is important that they should have a good standard of general education. Teachers of physical education in secondary schools should have at least passed the S.S.L.C. Examination and should have received some training in general principles of education and child psychology. They should be associated with the teaching of subjects like physiology and hygiene and should be given the same status as other teachers of similar qualifications in the school. If graduate trained teachers are available, they may take up teaching of certain special subjects. If the training institutions are effectively to discharge their duties, they should be staffed with carefully selected persons of technical competence and well-educated. Physical education does not consist in a mere display of strength but conduces to the physical, mental and moral welfare of the pupil concerned. As regards posts of greater responsibility such as Directors or Inspectors of Physical Education, we feel that training for two years may be necessary.

To provide the Training Schools with qualified physical instructors, there is need for considerable expansion of the training facilities. This may be done by increasing the facilities in the existing colleges and by opening new

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colleges where necessary. To meet the needs of the whole country we recommend that some of these institutions may be recognised as All-India Training Centres and given help both by the Centre and the State to enable them to train a larger number of personnel.

SUMMARY OF RECOMMENDATIONS

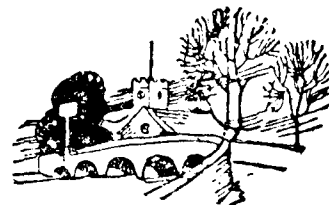
Health Education :

1. A properly organized school medical service should be built up in all States.
2. A thorough medical examination of all pupils and necessary follow-up and treatment where necessary should be carried out in all schools.
3. Some of the teachers should be trained in first aid and general principles of health so that they may co-operate intelligently with the medical staff.
4. Proper nutritional standard should be maintained in hostels and residential schools.
5. The school should assist, where possible, in the maintenance of the sanitation of the of the area and the school children should thus be trained to appreciate dignity of manual labour.

Physical Education :

6. Physical activities should be made to suit the individual and his capacity for physical endurance.
7. All teachers below the age of 40 should actively participate in many of the physical activities of students and thus make them a lively part of the school programme.
8. Full records of physical activities of the students must be maintained.
9. The training in physical education should be comprehensive enough to include all aspects of health education.
10. The teachers of physical education should be associated with the teaching of subjects like Physiology and Hygiene and given the same status as other teachers of similar qualifications.
11. The existing facilities for training of teachers of physical education should be expanded by increasing the seats in the existing colleges, by opening new colleges where necessary and by reorganising some of the institutions as All-India Training Centres to which aid may be given both by the Centre and the States.

*(Reproduced from the Report of the Secondary Education Commission—
Chairman Sir A. Lakshmanaswamy Mudaliar.)*



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Modern Principles of Physical Education in Europe

By Dr. Rysdorp

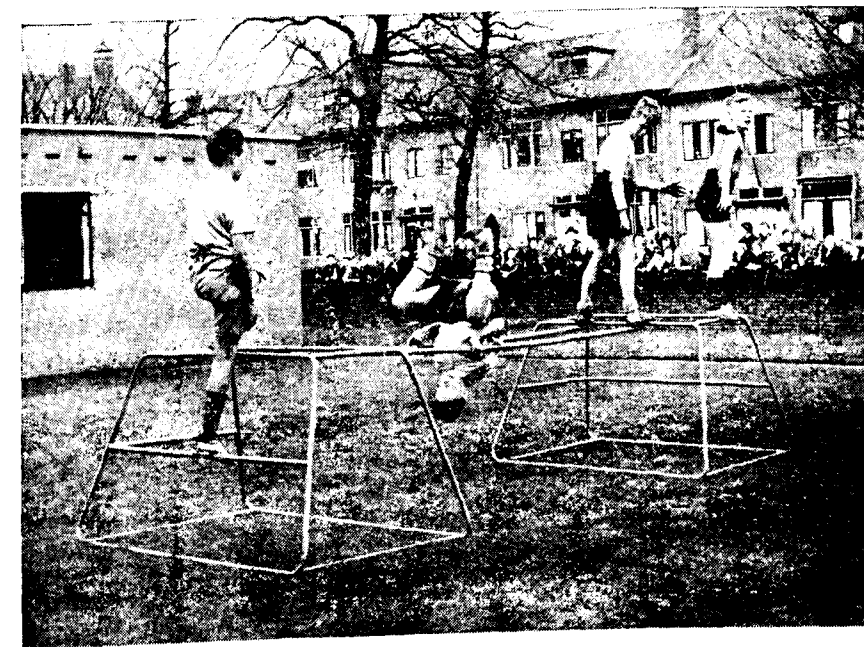
Superintendent of Physical Education, The Hague, Holland

In the various countries of old Europe physical education has changed its character entirely during the last 25 years. The countries which may be regarded as pioneers in the development of physical education are: Austria, The Netherlands and Switzerland, but also other countries have contributed to the renewal.

3. Gymnastics form the basis of physical education.

1. Physical education must be adapted to the nature of the child.

If we wish to bring up a child it is a mistake to think that we have to deal with a diminutive adult. A child goes through things in a



Education Through Activity

As main principles of this modern insight may be mentioned :

1. Physical education must be adapted to the nature of the child.
2. Physical education should aim at natural movement.

different way than adults do. It even goes through quite other things in the same world, because the world looks entirely different for a child than it looks for grown people.

Moreover a child reacts and behaves in a different way. Things that are felt by a child as important, often are not of any

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importance for us. But it is a remarkable fact that we, adults, often forget the converse of this psychological phenomenon, viz. what is important for grown people is not of any importance for a child in many cases.

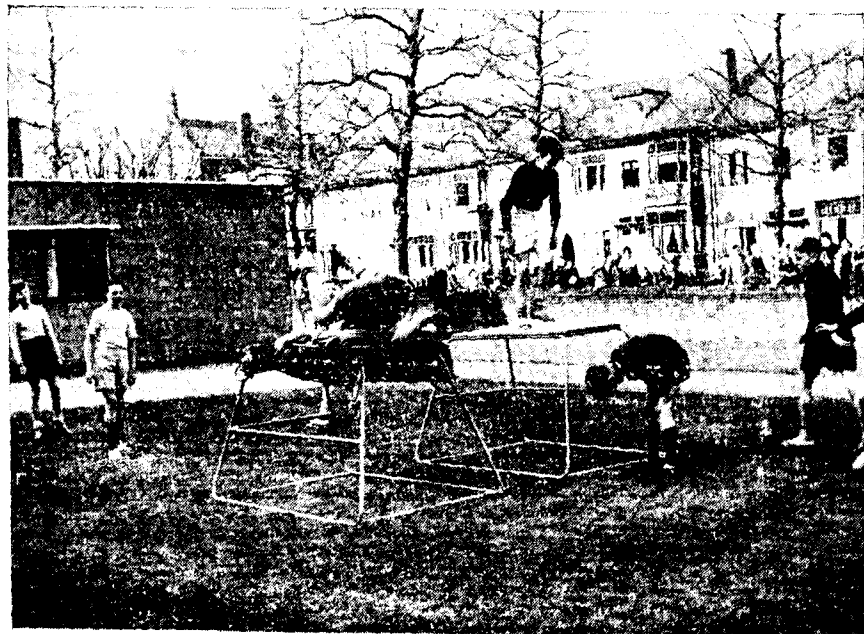
A child is not a small man or a small woman, but a child. In physical education we should not, therefore, dish up before the child some extract of food for adults, metaphorically speaking, but we have to approach the child in its proper domain of life.

What does this mean in terms of physical education?

starting point and the same goal; only the means are different.

The accent lies undoubtedly on a special aspect of human existence, viz. the bodily aspect, and it should be considered beneficial that somewhere in education this important aspect of the developing human being is accentuated.

Since the body is an aspect of total human existence, physical education forms an aspect of education as a whole. Also in physical education we have therefore to approach the child in its own domain of life.



Learning Difficult Movements

Physical education is education. It cannot be regarded as some independent part of it, that may be linked at will more or less with education as a whole. There should exist an integration of physical, intellectual, aesthetical and moral education. Education has one single aim: the education of the child to the status of the adult. Physical education is one facet of education as a whole, it has the same

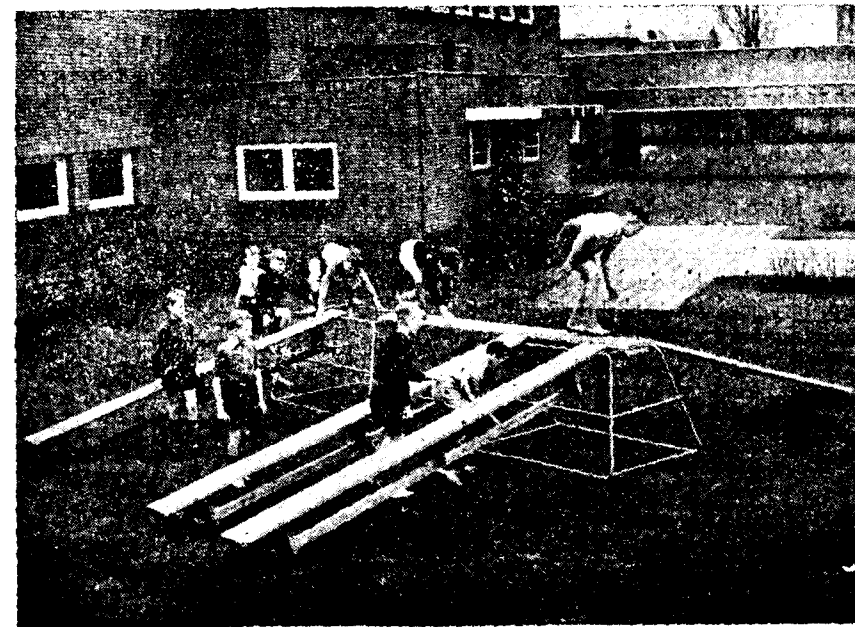
Previously children were forced to do exercises devised and intended to be carried out by grown people. These exercises were only a little simpler, less compound and less difficult to perform, but they were not "childlike".

Such exercises do not possess any mental content; they offer the child nothing that it can experience. And particularly this is

important; every exercise must be *action* for the child and not some exercise, obediently carried out on command, but in which the child is not interested at all.

If the exercise is to be a real *action* of the child, it should be such that it is experienced by the child as its *own* action. If this method is followed every action will also be a "child-like" action, not only because of its playish nature, its vividness, but also in its way of bodily exercise.

Netherlands). His influence is perceptible in all countries of western and central Europe. His ideas of physical education for women and girls have been worked out by Dr. Margeret Streicher. In numerous domains Dr. Gaulhofer's ideas have penetrated. Particularly the modern methodology for swimming and skiing may be mentioned in this respect. Even in Sweden, where the Swedish methods of gymnastics are followed, ideas that show much relation to Dr. Gaulhofer's are now



Education Through Variety of Actions

2. Physical education should aim at natural movement.

The foregoing conclusion leads us automatically to the second principle.

It is the Austrian professor Dr. Karl Gaulhofer who has propagated energetically and very successfully in Europe a natural way of exercise. Dr. Gaulhofer was a University professor at Vienna (Austria) and afterwards, unto his death, headmaster of the Academy of Physical Education at Amsterdam (The

being propagated by prominent people, including Mr. J. Thulin, president of the International Association of Physical Educators.

A further movement that has lead Europe to the adoption of natural physical exercise has been that of rhythmic gymnastics, the birth place of which is central Europe. The names of Dr. Rudolf Bode, J. Dalcroze and a lot of others are connected with this movement. There is no country in Europe in which their ideas about physical education

did not have any influence in some way or other.

The way in which man moves is quite different from the action of moving parts of a machine. A certain machine can only move in one and the same way. Two machines that are made exactly alike, move correspondingly exactly alike. But two human beings never move in the same way. Man is not a machine. He moves as a *person*. He does not put in action a set of muscles and bones in the way as is going on in the engine of a motorcar after the driver has pushed the starter. Man moves *himself*. It is not the body that moves itself, it is the man himself, the woman herself who does.

And a child being different from an adult moves in a different way. A girl does not move in the same way as a boy does. A businessman moves in another way than a clergyman; in human motion there is no uniformity.

Physical education has the task to eliminate the mental and physical obstacles that inhibit appropriate moving and posture corresponding to one's personality. Physical education, furthermore, must lead to a richer, a more beautiful and better human body control. This is more important than a record or winning a match.

3. Gymnastics form the basis of physical education.

The conclusion of the second paragraph indicates that competitive sports cannot be the basis of physical education. Surely I am aware of the attractions offered by matches and competitions and also of the propagandistic value of them. And all-Europe, that is so "production-and performance minded", knows it too!

But would it not be of great educative value, and particularly in a world where man is compelled to production and efficiency, that the educator devotes his special attention to proper body control, to the enrichment and embellishment of human life when man lays aside his constraints, his inhibitions and tensions, and builds up his healthiness and his ability as an individual and also in community with other people.

It is for this reason why gymnastics are being regarded in Europe as the basis of physical education for education. During the lessons the children do exercises that aim at improving the children's posture and movements.

Movements and exercises must keep a "child-like" character. Only such instructions should be given that can be experienced by the child as an *instruction*. For the teacher such an instruction must have the content of an exercise with a special purpose in view. For the child it means trying a clever trick or playing an attractive game.

I give two examples of the manner in which the teacher in Europe occupies himself with the children in modern gymnastics: a. The teacher says to the child: "Try to touch the floor with your hands as far in front of you as possible". The child tries it. The teacher looks on *how* the child does it. When he sees that the child keeps its knees stretched, he points out to the pupil that it can reach farther if it bends its knees. In this way the child learns by *experience in exercise* how to move naturally and adequately.

If the teacher perceives that the child cannot reach far because of stiffness of the ankle-joints, then he will make this pupil do hopping exercises in the ensuing lessons in order to make the ankles lithe and supple.

b. The teacher tells the child to jump a ditch. He notes that the child comes down in a wrong way, e.g. on the heels and with the knees stretched, so that it touches the ground with a shock. Now the teacher adds something to his instruction: "Leap the ditch again and at the same time make yourself as small as possible, hands on the ground." In this way he improves the method in jumping.

These examples illustrate the methods that are being applied by physical education in Europe in order to influence the way of moving. By executing the instructions for walking, running, jumping, climbing, crawling, swinging and many other ways of moving, the child acquires fully developed motion control. In the application of it in games and sports and above all things in daily life, it cannot but derive much pleasure from it.

Sprinting from Start to Finish

By Mel Patton

World Record Holder, 100 Yards Track Coach, Long Beach City College

The teaching theories of every coach represent the sum of all his experiences...his exposure to coaching, his participation as an athlete, his personal observations and study, and his work as a coach.

In this treatise on sprinting, I would like to present the ideas I have thus assimilated. They detail a clearcut method of starting, striding and finishing. In applying them, however, the wise coach will allow for individual differences.

Since physical structures vary, and one type cannot be deemed superior to another, certain variations will prove necessary. The stocky, short-legged sprinter may have to use a different start, stride or finish than the long-legged, hungry-looking sprinter. But, with proper body mechanics, both will break the tape in about the same time.

We have all heard the saying that sprinters are born and not made. This certainly is true. But I have never known a champion who didn't get that way either by correcting certain basic faults, by working hard to train or condition himself, or by fighting to overcome some mental block.

These champions were born with exceptional coordination, leg speed, and strength. Few had their techniques or style completely altered, but all had their basic fundamentals modified.

In the following paragraphs, I will try to analyse these fundamentals as I have observed and experienced them.

The crouch start is the most controversial part of the dash. Most runners start with their left foot forward. I do not know the

reason for this. Personally, I kept my right foot forward.

I reasoned that since most of the pressure at the start is exerted by the front foot and that since this pressure is greater and longer lasting than the pressure from the back foot, it seemed logical to place the stronger foot forward.

Since I was right-handed and right footed, the choice naturally fell to the right foot. It made sense to let my stronger foot bear the responsibility of moving most of my body weight quickly from the stationary position.

Regardless of what foot is forward, it is placed somewhere between 10 and 18 inches behind the starting line...depending upon the placement of the rear foot and the hands. Let's assume the left foot is forward, since most sprinters start that way.

The right (rear) leg is planted so that the knee is slightly ahead of the front foot. Now, with the right foot and knee on the ground, the sprinter leans forward so that the upper leg comes at right angles to the ground. This forces the back to be parallel with the track.

The arms are dropped straight down from the shoulders and nearly parallel to the rear upper leg. The hands are then moved three to six inches toward the foot and knee to form a mild V between the arms and rear upper leg. The hands are placed just behind the line, with the thumb and index finger parallel to the line.

Get Set Position :

Now the sprinter is on his marks, ready for the "get set" command. His weight is evenly



Lindy Remigino in

divided, making his position comfortable, and the rear leg muscles are not tight and tense due to any leaning back on the haunches.

To "get set," the sprinter simply raises his buttocks slowly, and leans slightly forward. The arms are kept from flexing at the elbows and the hands are in a tripod position.

The hips come to a stop above the shoulders. The correct hip elevation can be determined in two ways. First, they should never be raised to a point where the rear leg straightens out. This is the way John Treloar of Australia started in 1948; consequently, his rear foot did not move as fast as it should, and he was standing erect very early.

The second key to hip elevation is to watch the hips as the sprinter starts. If the hips move noticeably down on the start, you know the hips have been kept too high. If the hips move up, they've been positioned too low.

The head is still held in line with the body. No undue stress is placed on the neck. The eyes usually are looking at a spot from three to ten feet down the track.

Now, with the hips up and forward, and the head in line with the body, the runner is ready for the starting pistol.

I have always felt that the runner should be thinking about the gun—thinking when the gun will fire, but not moving until the report

is actually heard. The sprinter should not try to out-guess the starter, but should keep his mind alert by listening for the starting gun.

Once the report is heard, a number of movements must be immediately made. Tremendous pressure must be exerted by the feet to start the body moving. The greater amount of pressure is exerted by the front foot, in roughly a three-to-one ratio. The rear foot immediately starts forward, close to the ground. The high arc, which is so commonly seen, wastes valuable time. The foot must be placed in front of the hands; therefore, the quickest way is in a straight line, relatively close to the ground, rather than in a slow and awkward arc.

While most of the pressure is being brought against the block by the front foot and the rear foot is moving toward the first step, the arms are working, too...their job being that of balance and thrust.

The arm on the side of the lead leg is thrust sharply forward, while the other arm moves backward. The forward thrust movement should be of head height, and approximately 12 inches in front of the head.

It is not a pick-up and push-back motion with the hands. It's a vigorous arm action. This action may be increased by exercising a little imagination. The runner may pretend

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Action From The Start

a shelf or object is slightly in front of him at head height. At the gun, he should think in terms of grabbing for this object and quickly bringing it down.

How far in front of the starting blocks should the first step go? Many worry about over-striding or stepping. This happens only when the ankle is brought ahead of the knee on the first step, forcing the power upward rather than forward.

Thanks to the pressure and momentum of the front foot moving the body, the athlete can step as much as 15 to 24 inches ahead of the starting line, provided the knee is above the foot when it lands on the ground. The first steps should be good healthy ones.

The blocks should be left in a smooth rather than a leaping motion. The sprinter should pick up speed continuously and show no pause or break in acceleration upon entering the stride portion of the race.

The body raises to an upright position gradually. An immediate erect position is undesirable because it produces a loss of forward driving power and momentum.

Striding:

After the start, the sprinter enters the part of the race called the stride. This phase begins at different junctures for each runner.

Some athletes generate close to top speed in 15 yards; others take 20, 25 or 30 yards.

Once the stride is reached, the runner must maintain a slightly forward body angle, with his knees coming upward, his head in line with his body, and the body up on the toes. The hips are relaxed and actually swing with the leg.

These factors play an important part in increasing the size of the step without increasing the time it takes to make each step. The size of the stride and leg speed determine how fast the sprinter will run.

The arms are pulled slightly across the chest, but never past the middle half of the body. They are usually raised to shoulder height and swing back to the rear of the hip.

Finish:

The sprinter has now reached a point where he must increase his speed, if possible, for the finish. A breath may help, and vigorous controlled arm and leg speed is desirable.

It helped me to try to run on my toes a little more. I could definitely feel a difference when I increased my arm action and got up on my toes.

The athlete should run through the tape. It may help to throw the shoulder just as you meet the finish line. However, this must be a

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well-timed manoeuvre. Many times the distance is misjudged with disastrous results.

A leaping finish can hardly be recommended because of the problems involved in gathering for the jump.

The finish should be the easiest part of the race. The athlete should either run through the tape in normal sprinting form; or use a shoulder thrust if he can time it just as he reaches the tape.

Weekly Training Program :

A weekly training program may be arranged as follows :

Monday: Hardest work day of week; warm up, stretching loosening, and muscle-building exercises, easy jogging, and light running, building up to a few starts; over-distance or maximum distance ... 300 yards or two 220's.

Tuesday. Warm ups; starts, one or two 75-yard dashes with a few 20-30 yard sprints.

Wednesday: Warm up; starts, 20-30 yard dashes.

Thursday: Light warm up or complete rest.

Friday: Competition.

If the competition is on Saturday, another day of fast starts or an additional day of rest may be scheduled, depending, of course, on the condition of the athlete. The distances run for speed decrease each day until the runner is concentrating on short 20-30 yard sprints.

In his work on starting, the sprinter should be all business. He's there to learn how to start fast with the gun, and no horseplay should be permitted.

I usually work my sprinters, hurdlers (both high and low), and quarter-milers together so that only those needing special training start together. This makes for serious, concentrated practice.

(From the Scholastic coach, March 1953)



Track and Field

Training of Coaches

By Ted Arnold

During the past few years coaching schemes have been rapidly increasing. This year a record number of short training courses for both athletes and coaches have been organized. The National Sports Club has set aside a considerable sum of money and has planned coaching schemes in Bombay and Delhi. The Corporation of Bangalore conducted a training course for track and field athletes and coaches. Various Y. M. C. A. College staff members have been conducting training in Nagpur, Calcutta and Bombay, in addition to the Bangalore camp. All of these short courses are worthwhile and serve their purpose as a supplementary training programme. However, the fact remains that the basic job of training the vast number of expert coaches that India needs, must be done by the Colleges of Physical Education. Coaches must be well qualified and trained teachers. They must also know something of sociology and psychology. Most important of all they must have complete knowledge of the fundamentals and advanced coaching techniques, pertaining to the events they are teaching. In view of this need, the Y. M. C. A. College has been gradually increasing the emphasis on detailed instruction on coaching athletics and sports. The following outlines have been the work sheets of the staff members for teaching the fundamentals of track and field athletics this year.

Teaching the Start

All students must learn a crouch start. The medium start should be taught first because it

is the standard start and it is easy to change from a medium to either a long start or a bunch or bullet start.

Spacing of the feet

Medium start: When "on your marks" position is taken the knee of the rear leg will be about even with the toe of the front foot.

Long Start: The knee will be even with the instep of the front foot.

Bunch Start: The knee will be 4 to 6 inches ahead of the toe of the front foot.

Call attention to the fact that with our kind of blocks we have no choice as to lateral spacing but with starting pits or individual blocks lateral adjustment can be made to suit individuals.

Some coaches recommend a fairly wide lateral spread. On the other hand Lindy Remigino the Helsinki sprint champion prefers to start with one foot directly behind the other. The best rule to follow is to make sure the feet are in the line of force. In other words, our starting blocks are correct for most athletes.

Most people start with the left foot forward but a few start with the right forward. The front block should slant back about 45° while the rear block should be almost vertical.

On your marks: At the command "on your marks" step out in front and back into the blocks. Place the front foot first then rest

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the weight on the hands while placing the rear foot firmly against the rear block. Let the weight of the body rest on the front knee while placing the hands. Let the arms drop straight down from the shoulders coming to

away. The rear leg is carried forward quickly. The foot should stay close to the track. At the same time the left arm shoots forward and out with the hand going no higher than forehead height. The right arm is swung back



On your marks

rest on the tips of the fingers and thumbs, which are placed just behind the starting line. Look at a point on the track 3 to 5 yards ahead. Do not try to look at the finish as this may cause tension of the neck and shoulder muscles. Relax and listen for the next command. Plenty of time will be allowed for getting "on your marks."

Set

Raise the hips and lean forward. The hips should be raised till the back is parallel with the ground. The weight will be on the front foot and hands. A little more than 50% of the weight will be on the hands. Take a breath as you come to this position.

The gun: The runner should be thinking of "running away from his blocks". The gun is an automatic release "firing" him out and



Set

with elbow bent, and the hand some inches behind the hip. The right foot should land not more than 2 feet in front of the line, preferably less.

The "Pick up". This is the period when the runner accelerates away from the blocks. The following principles should be adopted:

Work the arms a feet vigorously. Do not "patter" away from the start. Increase the stride length gradually. Run straight. The knees pass close to each other, and the knee pick up increases with each stride. Do not let the trunk get up into the normal sprinting angle until 8 to 10 strides have been completed.

TEACHING HIGH JUMP

All students must learn either Western Roll, or Barrel Roll. The Western roll should be taught first because it is easier to teach. It

is not difficult to change from western roll to barrel roll after the former has been learned.

Fundamentals

1. Finding approximate take off point.

2. Stand facing bar, reach out arm from shoulder till finger tips just reach the bar. This is the approximate take off point.

3. *Run up:* The run up should be seven steps. The angle of run up should be about 45 degrees. To find the starting point, run the seven steps in reverse from the take off point. Practice the run up a number of times without jumping till you know the exact starting point to bring you to the take off point in seven steps.

The jumper must accelerate his speed in the run up so that he reaches $\frac{3}{4}$ speed at the take off. Full speed is not needed. You need only enough speed to carry you over the bar. The emphasis must be on leg spring in the actual jump.

The actual jump

Take off: (from the leg nearest to bar): The last step is a relaxing step. Let the foot come down flat and let the knee bend slightly. The take off must be made when the weight is directly over the take off foot. Swing up the arms and kick up, with the lead leg. Then spring up with the take off foot.

Fold the take off foot under the leg and lay out flat over the bar. The knees and shoulders will be over the bar while the hips are still below it. Do a quick roll and lift the lead leg to bring up the hips. Land in the pit on the take off foot and the hands.

Most of the practice should be done at a height that can be cleared rather easily. If good form is perfected, height will come automatically in competition.

To teach the form to beginners put the bar very low and have them hop over on one foot. Next do a hop and partial lay out landing on take off foot and hands. Finally try to do the jump in good form.

In training for high jump the athlete needs to do jumping only two or three days a week. The other days he should do conditioning exercises, stretching exercises, wind sprints and drills to perfect his run up.

TEACHING LONG JUMP

First teach jumping from with easy jumps from a chunam line near the edge of the pit. All the students must learn either the hip swing or hitch kick method of jumping. Do not permit students to use the old method of simply holding up the feet and sailing as far as possible. Point out the fact that this method is as obsolete as the scissors method of high jump. The hip swing method should be taught first as follows.

1. *Take-off:* The last step should be a relaxing step, the heel comes down, the knee bends slightly as the take off foot hits the take off point. Formerly many coaches taught the jumpers to stamp down hard with the take-off foot but the better coaches at present suggest relaxing, rather than stamping. The take off should start when the body weight is directly over the take-off foot.

The spring is taken by rocking up from the heel to the ball of the foot and by extending the knee and ankle joints. The arms should swing forward and upward and the lead leg should swing up as if the jumper were starting over a hurdle.

2. *Form in the air:* As soon as the jumper is in the air, the lead leg swings back beside the take off leg so that the jumper gives the appearance of kneeling in the air with his arms extended forward and upward. When the jumper reaches his highest point, he

simultaneously pulls the arms downward and swings the legs forward, from the hips, like a pendulum on a clock, until he appears to be sitting in the air.

3. *Landing*: The jumper holds the "sitting in the air" position until he is almost ready to drop into the pit. At this point, he lets his feet down and throws his head and hands forward. This carries his body weight over the feet so that he will not fall backward in the pit.

The Hitch Kick should then be taught as follows:

1. Take off - same as for Hip Swing.
2. Form in the air

When the jumper is in the hurdle position, he brings the lead leg back and the take off leg forward as for one complete stride in the air. Then he brings the take off leg back beside the other leg and does a hip swing.

3. Landing - Same as in Hip Swing.

Perfecting the Run Up for Long Jump

Every student must perfect his own run up for Long Jump with the correct starting point and two intermediate check marks. Teach an approach of 18 steps, divided into six, six and six. To find the approximate starting point, the student must stand with his heels on the take off board and run the eighteen steps in reverse. He must accelerate his speed gradually until he reaches the full speed. The spot where his foot comes down on the 18th step will be his approximate starting point. This approximate starting point should be determined at the first lesson. The intermediate check marks should not be put in until a later date. This will allow some time for each student to take enough practice run ups to adjust his starting point and perfect it. The first practice run ups should be taken at the side of the run way. The student should not

look at the board or make any effort to adjust his step while running. The coach stands near the take off board and notes whether the step is correct, short or over. If it is short or over a suitable adjustment should be made at the starting point.

In starting the run up, the first step must be taken with the foot opposite the take off foot. As an aid in easily locating the starting point, when working with a large class of jumpers, the coach should put chunam marks at 85, 90 - 95, 100 x 105 feet.

After the starting point has been perfected, the intermediate check marks can be put in. Two assistants are required to spot the points where the take off foot comes down on the sixth and twelfth steps. If after several trials the jumper hits these same spots consistently these can be taken as his correct intermediate check marks.

The distance from the board to the check marks can then be taken. Whenever the athlete wishes to jump in the future, he can take the measurements and place markers. This will ensure him of a correct take off.

TEACHING SHOT PUT

Teach standing put first. The shot should be carried well up on the fingers. The shot can rest against the neck or close to it with the elbow well out from the body.

The body weight should be over the right leg. The body should be carried in a slight crouch. Most of the weight will be on the ball of the foot although the heel touches the ground tightly. The right foot will rest in the center of the ring with the toe at right angles to the direction of the throw. Some putters turn the right toe even a little more to the right. The left foot will be extended forward almost against the toe board. The foot will rest just to the left of the direction of the throw. The toe will be turned at an angle

of about 45° to the right of the direction of the throw.

To make the put, bend the body back to the right then start to rock forward giving a powerful drive with the right leg. The power which starts with the leg drive is quickly transferred through the hip thrust and chest extension to the shoulder. With a terrific explosive force the shoulder is driven forward and upward. The arm pushes and the shot is released with a final wrist snap. As the put is made the body weight starts to shift from the right to the left foot, but just as the shot leaves the hand the right foot is thrown forward and the left foot is thrown back in what is called the reverse. The purpose of the reverse is to prevent the putter from losing his balance and falling out of the ring. The reverse does not add any distance to the put and must not be executed until the shot leaves the putter's hand. The *second step* to be taught is the *wind up*. Take a position at the back of the ring, with the weight of the body on the right leg. To wind up, swing the left leg forward in the direction of the throw about three times. The first two times let it return to the ground beside the right foot. The third time let it swing back past the heel of the right foot as the body drops lower into a crouch. The putter is then in position to start his forward glide across the ring.

The glide: Swing the left leg forward in the direction of the throw and hop forward with the right foot to the putting position. Care must be taken that the right foot is kept close to the ground on this forward hop. It is advisable to let the spikes scrape the dirt during practice in order to make sure the foot is kept close to the ground. The forward glide must be practised until it can be executed with great speed. It is also important to finish the glide in perfect position with the body weight directly over the right leg. After the standing put the wind up, and glide are perfected, they should be combined. *Note*: The angle of flight of the shot should be approximately 45°.

Position of the left arm: The left arm is usually carried at shoulder level, bent at the elbow during the wind up and glide. Just before the put is made, it is extended in the direction of the throw and, as the throw is made, it is pulled smartly down and to the left.

New Method: Just as in discus throw some shot putters start their wind up facing opposite the direction of the throw. From this position the wind up must start with a backward kick up rather than forward. The extra body turn on the forward glide will give the thrower greater throwing momentum.

(To be continued)



160095

Physical Fitness Tests

Shri. P. M. Joseph B.Sc., B.P.E., M.Ed., Principal,
Training Institute for Physical Education, Kandivali

Physical fitness should be one of the most important outcomes of a good programme of physical education. Physical fitness involves ability to perform efficiently the normal functions of life, ability to work productively for one's own livelihood and to contribute to national economy, and ability to meet emergencies in one's own life or on occasions of national emergencies such as war, disorder or natural calamities. Basically such fitness depends on a well developed muscular system plus a well functioning organic system, both, together trained to perform physical tasks with skill and efficiency.

The worthwhileness of a programme of physical education is to be assessed in terms of the physical fitness it achieves. The administrator who is promoting physical education would naturally desire to know whether a programme is yielding desired results. Again, a boy will be keen to know what his standard of fitness is in terms of some normal; he would also desire to know his abilities in comparison with his friends or others. If he can see improvement he will feel encouraged; if he is not as good as his companions he may get stimulated to strive harder. Those who finance or promote a programme of physical education would like to check whether their investments and efforts are yielding beneficial results. Here also tests will be found necessary. Further it will be good to know how physically fit our nation is as compared with other nations. Tests and measurements in physical fitness will help us to do all these.

It will be possible to make such assessments and comparisons only when we have methods

for testing measuring and recording physical fitness. There is, therefore, need to devise suitable tests and methods of administering these tests. The results of these tests can be statistically studied and certain standards fixed as worthy of achievement.

Physical fitness, in the past, used to be assessed on the basis of muscular development and size. Those who had big chests, biceps or thighs were thought of as the physically fit. However, it was found that muscle size need not necessarily be accompanied by organic efficiency or skill to perform daily tasks. A huge muscular system may, instead of being an asset, become a liability for a person who has to perform skilled tasks in a workshop or an office.

Studies and observations indicate that four of the fundamental factors of physical fitness are *strength, speed, agility* and *endurance*. Persons who possess these, to a satisfactory standard, are found to be capable of living and enjoying a normal life; and further, have the capacity to properly respond when heavier demands are made on them during times of stress and struggles. It would, therefore, be well to devise suitable tests which can measure these qualities.

In devising such tests a few important factors should be borne in mind. The test should test the quality it is intended to test. It should be measurable objectively. It should not involve the use of complicated or costly apparatus. The administration of the test should be simple enough to be done without much special technical training. It should be possible to complete the test without taking

too much time. The items of the test must have a natural appeal to the normal person.

Two types of tests may be tried out.

1. Itemised Tests:—Here separate tests are arranged to measure separate qualities. The following are suggested:—

1. Strength:—Ability to lift oneself, or lift a weight. A very good way of testing the ability to lift oneself is to use the usual pull-up test on a horizontal bar. Record the number of times a person could do this.

Another test suggested is to lift a prescribed weight in a prescribed fashion and record the number of times this can be done. The weight must not be too light nor too heavy. Various lifts can be tried. Two are suggested. (1) Take a bag of grains or sand (or bar bells) about 25 to 50 pounds over head supported in both hands with hands flexed. Lift the weight stretching the arms to full extension and then lower to original flexed position. Repeat as many times as possible. Record the number of times. (2) Take a similar bag (or bar bells) but with a heavier weight say 50 to 100 pounds. Keep the bag on the head. if necessary, with the hands supporting upward. Start from the standing position. Sit to a knee bend position and come to a stand. Repeat as many times as possible and record the number of times. The weight to be used in both cases should be decided after due experimentation and must vary according to maturity of the individual tested. It may be possible to introduce a time factor in this test and record the number of performances in a prescribed time say 30 seconds to 60 seconds. Here again experimentation will be required.

2. Speed:—To run a short distance covering 50 to 100 metres and recording the time taken with the help of a stopwatch.

3. Agility:—Many simple tests can be tried out. An excellent test to assess the general physical agility is to measure the ability a person has, to project himself into space - for example, high jump or long jump. Both these need a jumping pit and certain other devices like jumping standards or jumping board. A simpler test, and one proved by experiment to be highly reliable, is the Sargent's Vertical Jump Test. Here the performer's reaching height (with hands raised up) while he stands is recorded. He then jumps upward from a standing position and marks on a wall or a board hand upstretched with the help of a chalk piece, the best height he can reach. The difference between this height and his reaching height is recorded as his vertical jumping ability.

4. Endurance:—This is ability to continue to perform a given task, fairly difficult, over a period of time. An excellent way of doing this is to run over a distance of 800 metres or more for grown ups; or 400 to 800 metres in the case of the less mature. Walking, if used, should be over a longer distance. Another excellent test is potato race. In this a number of potatoes or stones or wooden blocks are placed in a circle - this may be, 12, 8, 4 or any suitable number. These are to be transferred to another circle 10, 15 or 20 metres or yards away, carrying one piece at a time. The total time taken to transfer all the pieces is recorded. Standards on number of potatoes and the distance between the two circles are to be fixed after necessary experimentation.

A number of other tests also can be worked out, tried, and standards fixed for the different skills.

2. A Combined Test:—A second type of test is to combine all the fitness factors into a

women, which enrolment has beaten all previous records. It is very encouraging that 38 graduates are undergoing the training for University Diploma this year. The strength of the Higher Grade has also gone up considerably. There is marked improvement in "quality" as well and so, we believe that we are progressing on proper lines. Owing to the delay in obtaining the Government's approval for conducting the Post-Diploma Course, enough publicity could not be given. There is one student at present undergoing the training. We are receiving several application

During his stay in Ceylon, Mr. Abraham visited many schools and colleges and also the new University. He was given a reception at Colombo by our old students. On his return, he had many interesting things to share with the staff and students.

Mr. T. W. Arnold has been helping with Basketball, Swimming and Athletic Camps organised by the Y. M. C. A. at Bangalore, Calcutta and Bombay. The College has spared the services of Mr. Arnold whenever possible to assist the Y. M. C. A. in carrying on its Five Year Plan.



College Volley Ball Team

for the next years' course. We have drawn our students from all parts of India and also the neighbouring island, Ceylon. Though they have carried with them different customs and manners, they have learnt to live as members of one large family.

Staff:

The Principal Mr. C. C. Abraham paid a visit to Ceylon in October and spent ten days there.

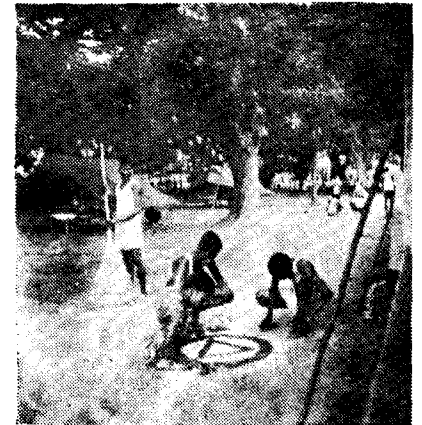
Mr. S. D. Chopde has proceeded to U. S. A. for post graduate study in Physical Education. He will spend one year at the Springfield College. We are glad that after a break of several years one of our staff members was able to get a suitable scholarship. All our best wishes go out to "S. D. C."

Mrs. D. J. Joseph who was on leave for one year has joined the College.

COLLEGE CAMP IN PICTURES



Hoisting the National Flag



Keeping Clean



Happy Being Busy



Preparing a Gadget



Washing Plates



Teaching Knots

COLLEGE CAMP IN PICTURES



Learning Crafts



Weaving



Inside the Camp



Circus in Camp



Tug-of-War



Beautifying

VYAYAM

[DECEMBER 1953]

Mr. J. P. Thomas conducted a short course in Physical Education at Nagpur Y. M. C. A. This venture was a success and the services of Mr. Thomas were very much appreciated.

Mr. M. Ananda Raj left the College in October. A function was arranged on the eve of his departure to bid him farewell.

The College has come across difficult days when staff members leave its ranks all of a sudden to try to make their way in the world outside. Nevertheless this College retains a solid central core of teachers which continue

of old students and friends of the College responded to our invitation. The Principal Mr. C. C. Abraham welcomed the gathering and the Hon'ble Mr. Justice Mack delivered the inaugural address.

Buck Commemoration :

Buck Commemoration Day was observed at the College on 24th July '53. It was a day of remembrance and rededication. We owe a great deal to this great man, Mr. Buck, the father of this great institution. He did not



College Hockey Team

through years and to them especially we owe a debt of gratitude.

We have a new staff member Mr. D.S. Luther (1947-48) who hails from Bellary. He was formerly Physical Director of Government College, Anantapur.

Inauguration :

The inaugural function was held at the Open Air Theatre on 10th July '53. A large number

live up to enjoy the fruits of his labour but "Buck" will live for ever and his name will long be remembered.

There was a public meeting in the evening at the Theatre. The meeting was largely attended. Principal Abraham explained the significance of the day and Mr. L. K. Govindarajulu and Mrs. D. J. Joseph paid tributes to the late Mr. H. C. Buck.

Independence Day :

Great hilarity and enthusiasm marked the celebration of Independence Day at the College. We began in the customary way with flag salutation which was observed with due solemnity. After the ceremony, the Principal spoke on the significance of 15th of August. The function came to a close with a soft ball match between the staff and students.

Picnic :

We went on a picnic to Ennore in the first term and had an interesting programme. It was a pleasant experience to spend a day outdoors and have a change from daily life. The picnic was very much appreciated by the students.

Camp :

The high light of the first term's work was of course, our annual Leaders' Training Camp for the students which was conducted in the first week of October '53 at the Old Malayan Emigration Depot, near Avadi. When we look back and take stock of this years' camp, we hope that we are not boasting when we say that "we had an excellent camp". The students had rich and varied experiences on which they will look back with pleasure all these days. The carry-over of the camp, the "How-How" are heard now and then on the college campus.

College Teams :

The college representative teams in all major games and sports have very high standard. We are fortunate in having many outstanding players and athletes. Further they are given systematic coaching and training at the college. We take pleasure in recording some of our achievements.

The college Volleyball team won the Bethram Memorial tournament conducted by the Loyola College. In this connection we are particularly proud in informing the readers that we were the first in South India to play

the continental type of game. The team game exhibited by our boys was accepted as something new and it won high appreciation among the public.

The basketball team won the runners-up at the Loyola College tournament. The team gave a very good account of itself.

Our track and field team won the Chettinad Cup at the Inter-Collegiate Athletics organized by the Annamalai University. Many of our athletes distinguished themselves in their events.

They Hockey team participated in a hockey tournament at Madanapalle and came up to the finals.

Dr. Nash on the Campus :

Dr. Jay B. Nash, Fullbright Professor in India was with us for almost a month from 17th November 1953. While in Madras Dr. Nash addressed the Headmasters' Conference and the Physical Education profession. He gave a series of lectures on Physical Education to the staff and students of the college and also to the trainees in the four Teachers Training institutions for both men and women. He also conducted a seminar for Physical Education and Physical Education teachers in the City. Dr. Nash was given a public reception and was also presented with an address by the State Physical Education Association, the Alumni Association and the College of Physical Education, also at a farewell function. Dr. Nash's lectures and seminars were instructional and illuminative. His presence in the campus was a source of great inspiration for all of us. It is our hope that more men of Dr. Nash's eminence will come to India as Fullbright Professors and help to make Physical Education a real profession. It is also our hope that a few men and women from India will also be provided with the facilities to go to the U. S. A. for post-graduate education in exchange.

Review of Work during the Second Term.

We had a "Go Fast" programme in the second term. The staff and students kept themselves extremely busy. Several new activities were taught. The presence of Dr. Nash was a source of great inspiration. The students and staff spent a good deal of their time practising the various physical activities planned for a demonstration at the farewell function for Dr. Nash. Practically every student was taking part in this demonstration. The demonstration included practically all the activities taught at the college. There was a distinguished gathering to witness the demonstration at the farewell function. We had several of our alumni watching the demonstration. Dr. Nash was very much impressed.

Following the demonstration of physical activities, the College choir sang a few Christmas Carols and Ted Arnold led the whole group in singing some popular songs. Dr. Nash was then garlanded by the Captains of the ten Houses. He was evidently touched by the warmth of our farewell function and he indicated that he will always remember Madras and what Madras had done for him. The address was then read by one of the students and presented in a casket.

Play Day :

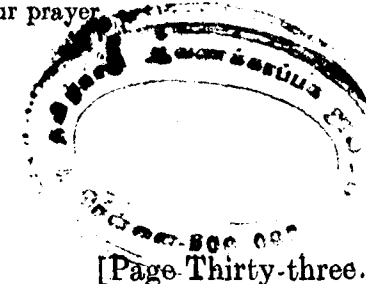
A Play Day for school children in the neighbourhood was organised by Mr. J. P. Thomas with the help of a student committee on the 12th December, 1953. Very nearly 3,000 children from the various Corporation Schools assembled at the college in their colourful dresses. There was a very impressive march past. A very interesting programme of dances, rhythms and simple movements was then gone

through, each school under the charge of a student leader. It was a day of play, fun and competition for the 3,000 children who came from 20 different schools in and around the college. The Mayor of Madras was present on the occasion and was a very interested spectator. We are planning a Play Day for over 10,000 children at the Corporation Stadium in January.

Christmas Celebrations :

Christmas was celebrated with great enthusiasm at the college. Long before the closing of the college, student committee planned details for a grand and proper celebration of Christmas. Early in the second term, a few interested students started to learn the Christmas carols under a Choir Master. A Christmas Play was being rehearsed under the direction of Mrs. D. D'Souza. On the morning of the 17th Dec., there was a very interesting programme of competitions for the entire staff of the college including the ground staff. This was organised by the Student Association. The programme was lively and interesting and all the students enjoyed it, particularly the ground staff and their children.

In the evening, a very impressive Christmas Play was staged at the Buck Memorial Theatre with the accompaniment of the Christmas songs and carols. Following the Christmas Play, there was dinner for the students and staff and some friends of the college. Later "Santa Claus" appeared and distributed gifts to one and all, wishing everyone a happy Christmas and a bright New Year. Let the message of Christmas of peace and joy pervade all mankind is our prayer.



ALUMNI NEWS

By V. E. EASAW

Alumni in the limelight

Dr. K. V. Varki is appointed as an Educational Officer in the Ministry of Education, Government of India. Dr. Varki was a student of our College in 1942-43. After graduating from this college, he worked for an year in the St. Paul's High School, Vepery, Madras. He was then appointed as Lecturer of this College. After 3 years, he was awarded a Fellowship at the Columbia University, New York. Making full use of the opportunity, he took his M.A. and Ph. D. from the Columbia University. His thesis for Ph. D. was on the "Organisation of Physical Education in India."

After returning to India, Dr. Varki worked in the United States Information Service, New Delhi as Research Officer for a period of two years. In this capacity he toured several parts of India and made surveys.

His appointment as Educational Officer in the Ministry of Education is a matter of great joy for the College and the alumni. Dr. Varki is now actively associated with Mr. G. D. Sondhi, Honorary Adviser on Youth Welfare to the Government of India. Two Youth Welfare Camps, one in Srinagar and the other at Mahabaleshwar have already been held. We are glad indeed that Dr. Varki is associated with Mr. Sondhi who is a leading figure in India in the field of Youth Welfare, Sports and Recreation. We congratulate Dr. Varki on his appointment and wish him all success.

M. A. Kurup

We take pleasure in reporting that M. A. Kurup is now in Ethiopia. He was a student of the College in 1948-49. After graduating he was working as Physical Director of the Madras Veterinary College for 6 years.

At present he is working as a Physical Director and Warden of a very large high

school in Addis Ababa. The Ministry of Education in Ethiopia is very much pleased with Kurup and the efficient way he is handling Physical Education in the School. Great praise is also given to his successful handling of the responsibilities as a warden. We wish Kurup every success in his new venture. We feel certain that he will make a valuable contribution to Physical Education in Ethiopia.

M. Swaminathan

Swaminathan has also taken up an appointment under the Ministry of Education, Government of Ethiopia. He was a student in the college in 1946-47. After graduating, he was working as Physical Director of the Madras Medical College for 7 years. We wish Swaminathan every success. We feel sure that he will also make a solid contribution to Physical Education in Ethiopia.

C. Kangoon

Kangoon was a student in 1936-37. He worked as a Physical Education teacher in the Methodist English School in Rangoon till war broke out in Burma. Kangoon lost everything during the Japanese occupation of Burma including all his books and records.

We are glad to report that Kangoon is back again at work in Rangoon and is in charge of Physical Education in two schools, the Methodist English School and the Union Christian High School.

News came that Kangoon has been accepted as an International Football Referee. Our congratulation goes to Kangoon. Kangoon kept goal for a number of years in Burma. Dr. Gray happened to see him keep goal in Rangoon and persuaded him to come to Madras. As a student, Kangoon continued to keep goal. We could recall the matches he kept goal for the College. What a terror he was for the attacking forwards!!!

[Page Thirty-four...]

BOOK REVIEWS

THE STORY OF THE OLYMPIC GAMES 776 B.C.—1952 A. D.

by
John Kieran and Arthur Dalcy,
P. P. 437 Published
by
J. B. Lippincott Company, Philadelphia,
New York.

This is a revised volume. Comprehensive in contents and facts, it presents in a readable form the origin and development of Olympic games both ancient and modern. How the origin of the ancient Olympic Games is lost in mythology is well brought home, in picturesque description of legendary anecdotes connected with it. These not only throw light on ancient Olympic Games with their religious setting and glamour but presents a lively and entertaining reading to enliven even a sober reader. Especially, Pelops a youthful warrior of fine presence and great courage winning the hand of the exquisite and matchless Hippodamia throws fresh mythical charm on its origin. Besides this, the opening and closing ceremonies steeped in religious fervour elevate the Games to eternal realms, resulting in spiritual awe and inspiration both to the contestants and spectators.

How the love of the athletic body which is manifested in Greek art, music and literature and which must have been the spirit behind the Games where they were first staged ultimately became obliterated by a narrow greedy snatching for victories, creating an atmosphere of commercialism and professionalism which were partially responsible for their closure is narrated at the end of the first chapter.

The revival of modern Olympic Games through the untiring enthusiasm and zeal of Baron Pierre de Coubertin who had the vision that international rivalry in sports would

promote international amity in the broader field is depicted in the subsequent chapter.

The value and prestige of this volume is enhanced as it is the production of the two top sports writers of America. The graphic description of every minute detail of the Olympic Games staged at an interval of four years starting from 1896 to 1952, makes a casual reader feel as though he is witnessing the events. The athletes of year and by gone years, the picturesque episodes, the tribulations of the managers and the political reverberations of the Games themselves are well presented. The usual confusions, the aspirations of the competitors, the protests and disappointments are not excluded. The startling surprises, the superhuman performances, the magnificent victories are described graphically.

The complete records of Olympic champions in all events from boxing to skiing make this a source book that will prove invaluable to sports fans, competitors, coaches, sports writers, schools and colleges.

M. ANANDARAJ.

IF IT'S SPEED YOU'RE AFTER

by
E. McDonald Bailey

Published by
Stanley Paul & Co., Ltd.,
London.

Price 6sh.

No one could be better fitted than McDonald Bailey to write a book on sprinting. McDonald Bailey was the former British champion and joint holder of the world record for 100 meters. He has made a scientific study of

[Page Thirty-five...]

athletics especially sprinting and he knows everything there is to know about style, training and technique. He knows the personal and psychological problems of competing in the highest class.

In this book which may well become known as "The Sprinters Bible" he has backed the fruits of his years of experience on the track. This book is probably the most complete and the most scientific book on sprinting.

The author has given a beautiful account of the value of scientific training and hard work in the first chapter. Rigid self-discipline, a willingness to learn a determination not to be discouraged by early set backs-these are the prerequisites of success as a sprinter. The next nine chapters contains a wealth of valuable information on sprinting and sprint relay. The latter chapters deals with many other topics like exercises, diet, muscle injuries, sportsmanship etc., which are of great use, not only to sprinters but also to other athletes.

The book is printed in an attractive way with many action photographs of the author himself. These illustrations give a clear picture of the correct sprinting action from start to finish.

The wealth of scientific material for coaching found in this book will be of great help to coaches who want to train some real champions. His advice will be of immense value to all those who aspire to succeed as a sprinter. This book should be in the hands of coaches and sprinters, and also in every school, college and University library.

V. E. EASAW.

"CHILD DEVELOPMENT"

by

Marian and Brackenridge
and

Dr. E. Lee Vincent
(W. B. Saunders Co., Philadelphia
and London) 1950,
P. P. 622, 2nd Edn

This is the second Edition of a well written text-book published ten years ago on the subject of Physical and Psychological growth in children of School-going age. The authors are well qualified to write this very useful text, one being the Head of the Physical Growth Department of a well known School in U. S. A. and the other a Psychologist of the same School and now Dean of a college in New York.

The book shows evidence of an exhaustive study of child development in both body and mind considered as an integral whole; its fifteen chapters are cramped with information bearing upon principles of growth and their influences upon growth in all its aspects, physical, emotional, nutritional and environmental. The problems of motor control, sense perceptions and judgements, memory, imagination and creative activities, language, thinking and reasoning, personality trends in relation to patterns of social growth, Individuality and social adjustment, moral judgement and psycho-sexual development are among the subject of other chapters which make the book valuable both as a text-book for students of social problems, parents and both as a text book for teachers and as a general book of reference upon the subject of the growing child as an individual entity and as a unit of the social structure.

To students of Physical Education two chapters must be of special value. Chapter VII on the growth and use of the body is a veritable mine of interesting and valuable information and the emphasis here, as in other

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chapters of the book is on "the interrelation between physical and mental growth - the child considered "not as an aggregate of separate and independent parts but rather a whole to which each part contributes and in which each part is intimately affected by other parts." The subjections of the chapter deal with growth in size, body framework, organs and functions, and they provide a masterly summary of dependable and up-to-date knowledge on every aspect of growth and development matters of great importance to all teachers of Physical Education. The chapter in motor control deals with General Body control and the Finer Motor Skills in relation to their importance in Education. In its various stages - from the Nursery School to the High School. The last chapter summarising growth achievements leads the reader on naturally to the problems of adolescence.

Every Chapter of this book has been carefully planned and every problem has been dealt with scientifically and without bias. The numerous references, and the authorities cited make no undue demand on the reader's attention. Each chapter has at its end a number of questions for class study and a book list is given for study. In addition to the references a bibliography of nearly 1100 references shows how well authors have endeavoured to make their contribution dependable. A good index has been provided.

Numerous case studies render the discussions practical and helpful to understanding; and though the entire book relates to American conditions, much of the knowledge called in the volume and all the principles discussed in the book have a universal bearing upon the general problems of child development.

Altogether the book may generally be considered indispensable to school libraries and specially valuable to teachers in training. Educational effort in this country will be less wasteful and more fruitful if the knowledge

provided within this book is applied in the interests of our school children.

PHYSICAL EDUCATION—FOUNDATIONS AND PRINCIPLES.

By

C. L. Brownell & E. P. Hagman
McGraw Hill Book Company, Inc.,
New York.

This book is an authoritative work on the theory and practice of physical Education. It brings out certain problems relating to the foundation and function of physical education in contemporary society as no other text book has done so far. C. L. Brownell is well known as an author and a critical student of education who has done much pioneering work on original lines on the educational importance of a Physical Education programme.

This book has of five parts (1) Motivation (2) Programme (3) Instruction and supervision (4) Administration and (5) Evaluation. Each part starts with a good "Introduction" followed by a comprehensive and detailed study of the problems. There is a useful "summary" at the end of each part followed by exhaustive "Questions and Problems for Discussions" and an up to date "selected references." The chapters follow one another in natural sequence and each part forms a definite stage in the realisation of the objective of education as "to guard, cherish, advance and to make available in the life of coming generations the funded and growing wisdom, knowledge, and aspirations of the race." To this end the authors trace the contribution which could be made by a comprehensive programme of physical education and conclude that "the objective of physical education are, of course, parallel with those of general education, and physical education seeks no goals other than those compatible with accepted objectives of education."

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At a time when the reorganisation of Secondary Education is uppermost in all educational circles in India, this book brings out a newer emphasis and approach on an aspect of education hitherto sadly neglected in many States of India. Particular attention may be drawn to chapter 2, which defines the nature of physical education, discusses its function, and amplifies its unique contributions to the educative process. To students of History, chapters 4 and 5 on the "Influences of Historic Events before 1900", and in "20th century" would be specially interesting. Analysing the various historical factors which had far reaching influence at various stages of human development, the authors rightly conclude 'within limits physical education has always served the avowed purposes of a people at a given time and place.'

It is a book worth reading and must be in the possession of every student of education, particularly so with physical educationists. Many of the examples are American in their contents; but even these are highly illuminative and very apt. This book can easily become a text book at the Graduate level of teacher training in Physical Education. It is bound to be a commendable addition to any educational Library.

J. P. THOMAS.

MODERN TRACK AND FIELD

By

J. Kenneth Doherty

(Track Coach, University of Pennsylvania).

Published by PRENTICE-HALL, INC.

NEW YORK, 1953.

(Price Rs. 25/-)

Modern Track and Field by Doherty is the latest book on Track and Field. This book is written on the assumption that best performances from track athletes and track coaches

can be attained only after long, consistent, strenuous, and intelligent work. The author believes that there is no easy road to real achievement in this area any more than in any other area of human endeavour. A man gains in coaching knowledge in proportion to his willingness to pay for it in hard study and careful thought. It is also assumed by the author that the learning athlete as well as the coach needs certain background knowledge if he is to learn quickly and well. The validity of this assumption has been proved time and again in motor learning experiments conducted in Education. Simple repetition of an action without understanding of its how or why is a slow method of learning. But such repetition, supported by understanding and by the insight that comes from both, speeds learning greatly.

The book is in ten chapters. The introduction covers the place and organisation of track and field athletics in schools, colleges and Universities. The future of track and Field athletics is also discussed.

The first chapter deals with the promotion of track and field athletics within the schools and colleges. The procedures to be adopted in conducting well-organised Sports Meet is also covered in this Chapter.

The second chapter deals with the Sprints, 100, 200 and 400 yards. The third chapter deals with High Hurdles and Low hurdles. The fourth chapter deals with the Distance running. The fifth chapter deals with the Relay Races. Chapters six, seven and eight, deal with fundamentals of coaching Field events including Shot Put, Discus Throw, Javelin Throw, Running High Jump, Pole Vault, Running Broad Jump, and Running Hop Step and Jump. Chapter nine deals with the construction and care of facilities and equipment. Chapter ten deals with the Olympic Games.

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This book is not intended for the half-hearted or half-way coach or athlete, although he will undoubtedly find some help here. It is no Ten Easy Steps to success in track, although again, a step by step approach is made for each event. This book is really a serious study of the great sport of Track and Field athletics, its history, its promotion and its methods. As in the sport itself, only those who are willing to work for what they want will achieve real success here.

A book of this kind should be in the hands of every trained coach. It should also find a place in our University, College and School libraries.

C. C. ABRAHAM.

PHYSIOLOGY OF MUSCULAR ACTIVITY

By

Peter V. Karpovich

Published by

W. B. Saunders Company, Philadelphia and London 1953.

This book was originally written by Edward C. Schneider. With the exception of few chapters, most of the text has been revised and some entirely rewritten. Two new chapters have been added: Nerve Control of Muscular Activity and Energy Cost of various

activities. Among the new topics discussed in the present edition are: Effect of Hypnotism on Physical Performance, Reaction time of Athletes, Energy cost of Weight Lifting Skiing and Load carrying and Allergic Reaction to Physical Activities. A number of illustrations, some of them original, have been added.

The new edition is meant primarily to meet the needs of students of Physical Education. It is in 20 chapters. Earlier chapters deal with the effects of muscular activity on the various vital organs of the body. The problems of fatigue and staleness are then dealt with. The discussions on Health, Physical Fitness and Age and Tests of Physical Fitness, which follow are of great help to the Physical Educator. The relation of Body Type and Posture to Physical Fitness is aptly brought out. The discussion on the influence of ergogenic aids like alcohol, caffeine, cocaine, fruit juices, oxygen, sugar, vitamins, etc. on performance is very interesting. Tobacco smoking and athletic performance is a new feature of the book.

This book should be a text book for students in Physical Education. It should also be in the hands of those who conduct athletic training camps. No doubt, it is also a book for our libraries in colleges and Universities.

C. C. ABRAHAM

Books reviewed in Vyayam and other books on Physical Education, Health Education and Recreation can be obtained from the Y. M. C. A. Publishing House, 4, Russell Street, Calcutta.

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BOTH EXCEL!

LONDON
4th August 1952

Dear Mr. Uberoi,

Thanks for your Cablegram of the 25th July last which duly reached us at Helsinki. Your congratulations over our Victory gave us great encouragement and inspiration indeed.

I am glad, your "Buffering" and "Imperial" Hockey Sticks, with which you exclusively equipped my team, gave us splendid service. We won the World Hockey Championship at Helsinki with the same sticks. We found them excellent in balance and drive. Your sticks, therefore, proved our true and unfailing companions throughout our tour.

I may also mention that your Hockey Sticks were immensely liked in all the countries where we had opportunities to play. We often heard people saying - "They both excel - the Indian Hockey Team & Uberoi's Buffering." Undoubtedly a great tribute to you!

With kind regards,
Yours sincerely,
K. S. Datta
Captain,
Olympic Hockey Team, 1952
Helsinki

H. S. UBEROI, Ltd.
MANAGING DIRECTOR
UBEROI LTD.
NEW DELHI (INDIA)

Dear Sir,

You must have learnt by now that we have retained the Olympic Hockey Title for the fourth time in succession. We beat Holland in the final by 6-1.

All the boys used your Buffering Hockey Sticks which proved to be extremely satisfactory. I must thank you for all that you did for us at Calcutta.

Also please accept my hearty congratulations for the India Hockey Victory.

Yours faithfully,
Harbans Singh
Coach,
Indian Hockey Team.

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