Educational Technology and Methods of Teaching in Physical Education

BPEd - I

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EDUCATIONAL TECHNOLOGY AND METHODS OF TEACHING IN PHYSICAL EDUCATION

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Movement education: Definition and meaning of movement education - &ry concept of movement education, Strategy to be followed while teaching movement - Factors affecting movement - teaching fundamental movement skills - movement analysis - body awareness.

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UNIT - I: INTRODUCTION

MEANING AND DEFINITION OF EDUCATION

The National Policy on Education 1986 and as slightly modified in 1992 has also observed, "The country has reached a stage in its economic and technical development when a major effort must be made to derive the maximum benefit from the assets already created and to ensure that the fruits of change reach all sections. Education y/ is the high way to that goal." Again it states, "In our national perception education is essential for all. This is fundamental to our albround development, material and spiritual. In sum, education is a unique-investment in the present and the future."

There is no doubt that education plays a very significant role in moulding the ideas, habits, attitudes, interests and values of the children with a view to producing well-balanced personalities, aesthetically rich, culturally sound, emotionally stable, mentally alert, morally upright, physically strong, socially efficient, spiritually / enlightened, vocationally self-sufficient and internationally liberal.

Definition and Meaning of Education

Tie concept of education is like a diamond which appears to be iifferent colour (nature) when seen from different angles-points of view or philosophy of life. There are four important reasons for different definitions and interpretation of education. (1) Complex nature of human personality, (2) Complex nature of environment of a society, (3) Different philosophies of life and, (4) Different educational theories and practices.

Philosophers and thinkers from Yajnavalkya (about 600 BC) to Gandhiji (1869-1948 AD) in the East and Socrates (469-399 BC) to Dewey (1859-1952 AD) in the West have defined education differently in accordance with their philosophy of life. The result is that several concepts and definitions of education have emerged.

Here our purpose is not to have a detailed evaluation of various definitions as it is beyond the scope of this book. Therefore, only a few select definitions are quoted here to have an idea of the concept and functions of education,

Aristotle (384-322 BC) — Creation of a sound mind in a sound body;

Aurobindo, Sri (1872-1950) — Building of the human mind and spirit.

Comenius, John Amos (1592-1670) — Development of the whole man.

Gandhi, M.K. (1869-1948) — An all round drawing out of the best in the child and man-body, mind and spirit.

Radha Krishnan, Sarvapalli (1888-1975; — Training the intellect, refinement of the heart and discipline of the spirit.

Vivekananda Swami (1863-1 902) — Manifestation of divine perfection already existing in man.

Best Definition

A review of these definitions given in brief reveals that the definition given by Gandhiji is the best. Gandhiji had a scientific attitude of mind. He observed facts, sorted them before accepting them and after weighing them well, he drew his conclusions. Gandhiji felt that while physical and intellectual development was necessary. The training of a child's heart and spirit was more important. He remarked, "By education I mean an albround drawing

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out of the best in the child and man—body, mind arid spirit. Literacy is not the end of education nor even the beginning. It is one of the means whereby man and woman can be educated. Literacy in itself is no education."

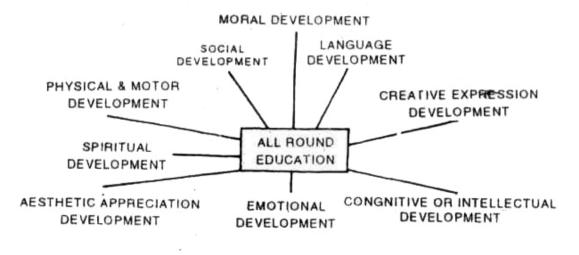


Illustration : All round Education

NON-FORMAL EDUCATION

Concept

Different alternatives are suggested to formal education. They are Informal or Incidental education, Nonformal education, Adult •ducation, Distant education etc. Doubts do arise as to whether all these types of education are one and the same or whether each one is different from the other or whether they are opposed to each other or Whether they are complementary to one another. It is, therefore, necessary to know their precise meaning.

In the introduction it was said that in a democracy, education should be made available to all citizens. It was also pointed out that the (twin purpose of education is to provide the citizen with the widest Opportunity to develop his/her personality to the maximum extent. In Nn over populated country like India, formal education cannot cater to Hie needs of all its citizens. It is therefore necessary that an alternative system like Non-formal education should fill up the gap.

Informal or Incidental Education

Education is a lifelong process. It is also very flexible. Learning progresses along with the growth of the child. The child learns various things from parents, and other members of the family, at home and also from those living in the surroundings. After joining the school or even without schooling, an individual learns many things through peer groups, friends, travels, radio, T.V., cinema etc. All this learning takes plice by observation and imitation incidentally and in an informal way. As learning experiences differ, each individual learner is sure to differ III his attainments. Those living in urban areas and those living in rural areas, live in different environments and so their incidental or informal learning differs. But still they learn what their homes and environment offers them in addition to what they learn based on instincts.

Formal Learning or Formal Education

Formal education, is very much institutionalised. It is structured and graded. There is a chronology starting from pre-primaiy or nursery classes and going right upto the university level. There is a specified syllabus to be covered in each class. The schools and colleges are marked out to cater to a set age group of students. Pre-primary, Primary, Upper primary, High school, Intermediate or +2 stage, Degree classes. P.G. courses etc., are stages in the

formal education system. There are set types of examinations, working hours and working days. Formal education has set goals and aims and is also well defined.

Some definitions of Formal Education

Education is something which makes a man self-reliant and non- selfish. - Rigveda

Education means training for the country and love of the nation. - Kautilya

Education is the manifestation of Divine perfection, already existing in man. - Vivekananda

Education is natural, harmonious and progressive development of man's innate powers. - Pestalozi

Education is the "development of all the capacities in the individual which will enable him to control his environment and fulfil his possibilities. - John Dewey

It is clear from the above definitions that formal education aims at drawing out the best from the individual and develop his personality in terms of self-actualization.

Definitions of Non-formal Education

From the very term it is clear that it is not formal education. It is neither totally different nor is it the opposite of formal education.

Non-formal education (N.F.E.) is imparted in a free atmosphere without rigidity of rules and regulations governing the formal schools and colleges. Non-formal education is free from formal requirements of rules and there is no compulsion of any sort. Any rigidity means destruction of the concept of non-formal education.

1. Philip Coombs

"Non-formal Education means an organised systematic educational activity carried on outside the framework of the formal system to provide selected types of learning to particular subgroups in the population, adults as well as children".

2. Malcom Adiseshiah

According to Malcom Adiseshiah, non-formal education is an organised programme of learning opportunities outside the formal educational system covering a person's lifetime and programmed to meet a specific need, remedial, or vocational or health or welfare or civic, political or for self-fulfilment concept

Some consider non-formal education as a complex one. They consider that it has to be improvised according to the needs of the learners who vary in their needs. It is also said that its attainments and values are not easily measurable by examinations and certificates. It covers learning in various areas like agriculture, occupational skills, health, sanitation, family planning, cooperatives, youth activities etc. Though it is considered as a tool for social, economic and political change, it has not given up its literacy aim. It covers literacy of illiterate adults and dropouts of formal education. Literacy under non- formal education does not mean only 3 Rs. It covers wider "dimensions". It helps in the increase of awareness level of the people. It also makes full use of the available resources of education.

N.F.E. covers many areas and dimensions. The following are the characteristics of non-formal education.

- 1. It is comprehensive in its coverage. It draws every man, woman and child into its fold.
- 2. It is open for rich and poor alike and adopts a democratic approach.
- 3. It has no fixed curriculum, no stipulated ^working days or working hours.

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- 4. It is flexible and adopts itself to suit the needs, skills and learner's abilities.
- 5. It is employment-oriented and work based.
- 6. It is open-minded. Movement from work to learning and learning to work is possible.
- 7. It is within the reach of everyone and is not costly.

DEVICES AND METHODS OF TEACHING

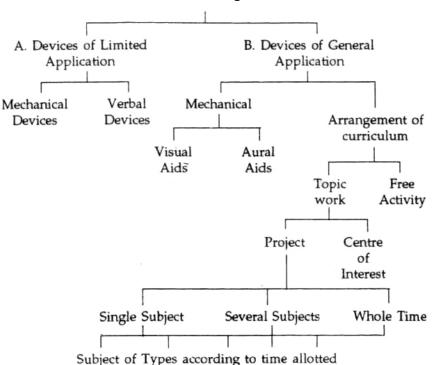
MEANING AND SIGNIFICANCE OF DEVICES OF TEACHING

In order to facilitate the learning process the teachers resort to what have been called 'Devices'. A device implies the external mode or form which teaching may take from time to time.

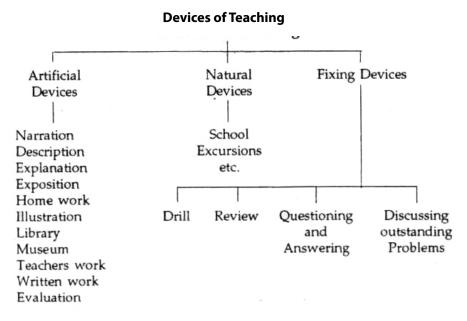
According to John Mander there are five main reasons which might justify the use of these teaching expedients. They are given below:

- (a) To teach something more thoroughly so that the children may retain the subject-matter taught.
- (b) To teach something more quickly. This will result in 'covering more ground' in a given time, and thus gives a better chance of "getting through the syllabus".
- (c) As a means of creating or sustaining interests.
- (d) As a means of integrating a number of separate pieces or work already learned by other means. -
- (e) As a means of bringing with the experience and understanding of children something which is new to them. This often includes the presentating to children, in simplified form, of matters which can be appreciated fully only by adults.

Johh Mander explains the various devices with the help of a diagram which is shown ahead:----



Classification of Teaching Devices



Group A. This category includes both tricks of verbal presentation, suited only to particular facts, and mechanical devices which illustrate single facts or process. "No book can hope to include all the advice needed by teachers in the selection and use of devices in category A."

The mechanical devices of Category A include much specialised apparatus. Counters or counting sticks may be used for the teaching of elementary number combinations. Words and letter cards are used in teaching reading. Their application is only to younger children.

Every fact, each sentence, offers its own opportunity for bright imagery and forceful expression.

Group B. Machines such as cinema, film strip projectors, epidiascope, etc., which may be used in the teaching of any subject are included under this heading. This device also includes devices of curriculum presentation, such as projects, which can be undertaken in any subject.

Curriculum may be taken up in different forms. It may be dealt with in the traditional form. It may be taken as 'Free Activity' and without the rigid control of the teacher. It may be presented in the form of 'Topic Work' or presented in the form of projects.

Some devices of teaching are termed as methods of teaching and vice versa. Examples are: The lecture method, discussion method, demonstration method, the problem method, deductive and inductive method, assignment method, supervised study.

It may benoted that the use of various terms in devices of teaching is arbitrary.

Devices of teaching are also categorised as natural and artificial devices of teaching. Natural devices are those wherein learning is a byproduct of direct experience, e.g., in object teaching, outdoor work and school excursions etc. On the other hand artificial devices include oral communication through narration, explanation, exposition and illustration also.

ASSIGNMENTS

Debate, Demonstration, Description, Discussion, Dramatization, Evaluation, Explanation, Exposition, Lecturing, Narration, Note, Dictation, Observation, Questioning, Source Material, Story Telling, Study Habits, Supervised Study, Textbooks, Teacher's Diary.

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Significance of an assignment. N.L. Bossing has observed, "The central position of the assignment in the techniques of teaching has remained unquestioned." G.H. Betts asserts, "Upon the proper assignment of the lesson depends much of the success of the recitation, and also much of the pupil's progress in learning how to study."

Teaching Techinique

Lecture Method

Lecture method is generally followed in the colleges and Departments of Universities. It is the most commonly and traditionally used method through ages at the higher education stage. It is mostly a teacher-centred and expository method involving one way communication and transmitting good quantum of knowledge or subject matter to a large number of individuals. Lecture is also found to be a feasible method of teaching in higher classes to the students who are motivated and required to achieve the desired learning objectives. The advantages and limitations of this method may be discussed here for providing necessary insight and guidance to teachers.

Characteristics

The lecture method has the following characteristics which have to be capitalised for better outcomes.

- Imparting good amount of content knowledge: Since the lecture method is mostly one way communication process and meant for adult learners, a big quantum of content knowledge can be transmitted and many teaching points can be covered through this. Thus economy of time and energy is ensured in this method.
- ii) Providing better opportunity for clarification of concepts: While teaching through the lecture method, a teacher knows the background and reception of the students from the attention and interests shown by them. He can assume and ascertain to what extent they have been able to appreciate and understand. Accordingly, he can clarify the difficult points or repeat the point not got by students properly. Thus he can carry the class with him getting proper feedback.
- iii) Vitalising dry and dead ideas: Spoken words are more effective than printed ones. In a lecture a teacher not only speaks but also changes tone, gestures, postures and facial expressions. He can thus use various devices for bringing in life, blood, colour, vivacity and vividness to the dead, dry and dreary material.
- iv) Making presentation more psychological than logical: A lecture can present the subject matter according to psychological and educational principles and not merely logically as is done in writing textual material.
 It, therefore, becomes emotionally appealing and psychologically sound.
- v) Ensuring flexibility and adaptability: The lecture method can ensure adequate flexibility according to the needs, ability, interests and previous knowledge of the pupils. A lecture is not just a straight jacket readymade method or material. It can be adjusted or adapted, suiting to the requirements and capability of students for whom it is intended.

Project Method

The Project method is a dynamic and democratic approach teaching, particularly suitable to the stage of higher education.

This method centres round a project which is a practical unit of activity having educational implications and aims at achieving not only knowledge, but also understanding, application and skills. It involves investigation, documentation and solution of problems. This is a student-centred method and planned by the student with the help of the teacher and conducted in a natural and real life situation.

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Meaning and Characteristics

An educational project is defined by Stevenson as "a problematic act carried to completion in its natural setting." According to Kilpatrick "A project is a whole-hearted purposeful activity proceeding in a social environment." It has been defined by Good (1973) as "a significant practical unit of activity having educational value and aimed at one or more definite goals of understanding, involves investigation and solution of problems" and is carried to completion by pupils and teachers in a natural real life, manner.

The characteristics of the project method are as follows:

- a. The project method aims at'teaching the students to get the best out of life and to prepare them for life. It is not meant merely for the future living, but also as a part of the present living.
- b. This method is an attempt to utilise experiences as the truest and best lesson which cannot be forgotten.
- c. It brings out the best of the potentiality in the student and provides opportunities for self-expression.
- d. This method enables the learners to translate theories into practices. It not only solves problems, but also the activity is actually carried to completion.
- e. In this method the activity chosen becomes the core and all learning experiences become incidental. The curriculum is reset and all barriers of subject matter are broken in organisation of the project.
- f. This method provides opportunities of working out purposeful projects of any character according to learners taste and interest viz., presenting a play or producing a class magazine. It may increase technical knowledge or motor skills.
- g. Although a project is undertaken with all sincerity and seriousness, a relaxed atmosphere prevails through this method, In spite of hard work, a project gives more satisfaction to the learners.
- h. In the project method, the workshop techniques are followed through which learners acquire more learning experiences according to the principle of "learning through doing."
- i. A project is usually organised in a life-like situation which provides actual and meaningful experiences to the student like "that of an apprentice learning his trade" as remarked by Dewey.
- j. The project method naturally implies group activity which means: co-operation, fellow feeling, sense of responsibility, mutual sharing and respect for others.

Demonstration Method

Demonstration Method lays emphasis on demonstrating experiments for teaching a particular topic, usually in science. The teacher performs all kinds of experiments in the classroom or science laboratory and explains the use of apparatus, chemicals and operations. This method, although mostly teacher-centered, encourages students' participation in conducting experiments. Many unfamiliar things become familiar and many abstract things become concrete, when students see with their own eyes and handle some of the apparatus and chemicals themselves. Since students are motivated to see new experiments, they observe attentively and learn everything critically.

Demonstration method proved to be one of the best methods in explaining new concepts and anecdotes. But the demonstrations are to be well-planned and rehearsed by the teacher. Otherwise, if all experiments fail in the classroom, it will have a very bad effect on the students. Once all experiments are well conducted, demonstration becomes successful and teaching becomes effective for achieving the objectives.

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Characteristics

There are several characteristics of the Demonstration Method which may be taken as criteria for ensuring success in teaching. These are as follows:

- i. Demonstration Method makes use of several experiments involving a series of operations.
- ii. These experiments need to be well-planned and rehearsed well in advance.
- iii. Success of experiments encourages and their failure discourages students in learning.
- iv. Students need encouragement to participate and involve themselves in conducting experiments.
- v. The teacher and students should be clear of the institutional objectives in lessons delivered.
- vi. The teacher must have adequate confidence and preparedness for demonstrations.
- vii. Students have to observe the operations with attention and know all apparatus with interest.
- viii. He should involve students as much as possible and seek their cooperation in performing experiments.
- ix. Questioning should, form an important part of demonstration, in order to get feedback from students about their understanding and assimilation.

METHODS OF TEACHING PHYSICAL ACTIVITIES

Various methods may be adopted for teaching physical activities.

1. Command Method.

Usually formal activities are taught by command method where certain words of command are used to obtain the required position. This is of two types (viz) Response Command & Rhythmic Command. To teach an exercise, Response Command is used where each position of tire exercise is to be held and the accuracy and the precision of the position are to be emphasised. The Rhythmic Command is used when the exercise already taught is to be repeated rhythmically for physiological results. Here emphasis is on movements and not on held positions.

2. Oral Method.

In this method the teacher merely explains the activity by words without any demonstration and he expects the class to perform it. (This method of teaching is not wholly desirable).

3. Demonstration Method.

Here the teacher will demonstrate the activity with a brief explanation. The students have to observe the teacher's demonstration and then perform the activity on the command of the teacher. This is the most highly recommended method of teaching.

4. Imitation Method.

This is adopted when an activity is one that was already taught or an activity which can be easily followed. In this case the teacher says "Follow me" or "Do as I do". When the teacher leads an activity and then changes the movements, the boys perform the same by imitation.

In this method the pupils are made to perform the movements of animals, birds, motor cars, trains, aeroplanes* soldiers, sailors etc., story plays and action songs in play form. There is a lot of scope for exhibiting the imagination of the pupils. This method is most suitable for the children of the Elementary grades.

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6. At Will Method.

In this method the students are given an opportunity to perform the activity in their own time and rhythm. In other words this is a free form of exercising.

7. Set-Dr ill Method.

This method will consist of a series of well-planned exercises of free arm type and exercises with light apparatus (dumb-bells, clubs, wands, poles etc.) These exercises are memorised and done rhythmically, not only for physiological effects but also for demonstrative values.

8. Whole Method.

This method is adopted whenever an activity is to be taught as a whole action without breaking it into its component parts. For example, the teaching of an athletic event like High Jump which includes a series of movements (viz. approach, take-off, lay-out, and landing) is done by this method, even though each of these movements may be analysed and emphasised.

9. Port Method.

This is adopted whenever a particular activity is broken into its meaningful parts and taught; for example, the teaching of the individual skills of a major game.

10. Whole-Part-Whole method.

In this method a full and clear conception of the whole activity is given at the outset. Then the activity is divided into its meaningful parts and taught. After practising these parts as separate skills they are put in a practice game situation. Thus initial practice is on the individual parts. Then the parts are combined into the whole activity. This method is highly recommended to teach a major game.

	WHOLE ACTIVITY	ITS MEANINGFUL PARTS
i.	Game of Football (Soccer)	Kicking, Dribbling, Trapping etc.
ii.	Kicking the Football	Approach, Planting of the standing leg, the swing of the kicking leg, proper I contact w'ith the ball, follow-through etc.

The following examples will clearly indicate what may be meant as a WHOLE or as a PART.

11. Progressive Part Method.

This method is to be adopted usually to teach rhythmic activities which require a lot of co-ordination. In this method the activity is taught step by step. At the outset step I will be taught; then step 2; afterwards steps I & 2 will be combined. Thereafter step 3 will be taught and steps 1, 2 & 3 will be combined. In this manner all the steps of the activity will be taught in a progressive manner. Finally, the whole activity will be performed with proper co-ordination. This method of teaching is called the Progressive part method. This method is also adopted to teach Track & Field athletics.

12. Observation and Visualization Method.

Students, whenever opportunity arises, may be taken to the places where Champion Teams and Athletes compete (eg. State, National Competitions etc.) so that they can observe them in action and learn some of the finer tactics, strategies and techniques of the games and the events. Films, preferably in slow motion, depicting the finer points of the activity may be repeatedly shown with due comments so that effective learning may take place.

UNIT II

PRESENTATION TECHNIQUE

The manner of artistic execution in presenting a subject matter is the Presentation Technique. A teacher must therefore make an analytical study of the subject matter, have a clear conception' of it, and then deliver it to the pupils so that they can easily assimilate it.

The presentation Technique may be studied under two heads (viz) Planning and Presentation.

(A) Planning

This may further be divided into,

- a. Personal preparation and
- b. Technical preparation.
- (a) Personal Preparation

The personality of the teacher goes a long way for his success in teaching. Hence he should always appear before the class well dressed and well prepared. A well-groomed appearance is always essential. He must have a commanding voice, pleasing manners and a sense of humour. He should avoid uncouth gestures and unnecessary mannerisms. He must be able to demonstrate the skills in a proper manner. In short, a teacher shall always set an example to the students and must be a model to be followed.

(b) Technical Preparation

The teacher must arrange the subject matter to be taught in proper sequence. It is better for him to write the teaching notes or to have a clear mental picture of the subject to be taught. He must arrange for teaching aids, ground markings, essential equipment, proper safety measures etc. The formation of the class and the way in which it should be organised for the concerned activities must be preplanned so that easy handling of the class takes place.

(B) Presentation

After making all preparations for handling a class, a teacher must be able to present the subject matter in the best way possible. Though there is no one best way of presenting a subject matter, a teacher must bear in mind the common characteristics of good' presentation. They are as follows

- i. Presentation must proceed from simple to complex and from known to unknown.
- ii. The presentation must be neither too fast nor very slow but must be adjusted to the pupils' level of understanding and skill.
- iii. Problems and situations shall be presented to the students to enable them to think and act.
- iv. For the better learning of the students, the teacher should always resort to improved techniques and tools.
- v. Students must be made to realize the importance of the part to the whole activity.

Having noted the characteristics of good presentation, let us deal with the steps in the way of presenting an activity.

STEPS IN THE WAY OF PRESENTATION

1. Orientation

This is initiating the students into the subject matter or an activity. Here a brief description of the origin, growth and development of the activity is given.

2. Verbal Explanation

This is explaining briefly the activity itself and the parts into which it can be divided and taught. (Avoid lengthy sermon).

3. Demonstration

This is the most important step in presenting an activity. The teacher must demonstrate the activity while the students have to observe carefully the demonstration. The demonstration should be a model. Along with the demonstration adequate explanation should also be given.

4. Exploration

The students try to explore and experiment the activity they observed.

5. Discussion

The teacher can assemble the students and have a group discussion. Here questions may be asked and answers elicited. Most of the problems and difficulties experienced by the pupils are brought forward and solutions suggested.

6. Supervision

Students practise the activity and the teacher goes round observing and rectifying the mistakes, if any, committed by the students. Supervision also includes the teacher's responsibility for the safety of the students during their practice.

7. Evaluation

No presentation is complete without evaluation. It is necessary to find out the progress made by the students. After a series of presentation of a particular activity the teacher, must find out how far the students have improved their skills in that activity. This can be found out by means of testing and grading them. If evaluation shows that adequate progress is not made, reasons should be analysed and better procedures of teaching must be adopted.

COMMANDS

In the previous chapter mention has been made of the Command Method (viz) Response Command and Rhythmic Command. Commands give the required information) and bring about quick and uniform response and desired results. Let us deal with them in detail.

Response Command.

This is used when a single movement is to take place. Here each position of the exercise is to be held and the accuracy and the precision of the position are to be emphasised. This command consists of 3 parts:- (i) Explanation (ii) Pause and (iii) execution.

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Example

	(Explanatory)	(Pause)	(Executive)
a.	Arms forward upward		Raise
b.	Raising arms forward upward		One.

The *explanatory part* should consist of only essential words in order to give a clear mental picture of the movement to be done. This part should be uttered in a clear tone without any hesitation and should end with a falling inflexion of voice.

The *pause* gives sufficient time for the class to form a clear mental picture of the explanatory part so that the required movement may be done properly on the command of execution. The duration of the pause depends upon the simplicity or the complexity of the explanatory part.

The *executive* part is the ultimate signal for the immediate performance of the required movement by the class. For this part, either a word or a number will be used (as shown in the example.) This command of execution should be given in a sharp tone with a rising inflexion of voice.

Rhythmic Command.

This command is used when the exercise already taught is to be repeated rhythmically for physiological results. Here emphasis is on movements and not on held positions. This command normally consists of 5 parts:-(1) Explanation (2) Pause (3) Execution (4) Rhythmic counting and (5) Halting.

For example				
Explanatory	Pause	Executive	Rhythmic Counting	Halting
Continuously and rhythmically.				
(raising arms forward upward		Begin	1, 2, 3, 4, 1, 2, 3, 4	
and lowering arms forward			1, 2, 3, 4, 1, 2, Class	HALT

downward) CLASS

The details given for the parts of the Response command are applicable to the first three parts of Rhythmic command. In the example, under the explanatory part of the rhythmic command, we have explained the exercise. When once the exercise taught is to be repeated immediately for physiological elfects, there is no need to explain the exercise under the explanatory part. It is enough to give the following Command, in the place of the first 3 parts.

"Continuously and rhythmically, Class Begin"

Rhythmic counting starts immediately after the command "Begin". The counting and the taking of the positions must coincide. Whether the counting is to be slow or fast depends upon the nature of the exercise. But there should be proper rhythm in counting.

Whenever the exercise is to be brought to a halt the command "Class..Halt" should be given instead of the last two counts.

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The following are the various ways of Counting and Halting.

- (a) I, 2, 3, 4, 1, 2, 3, 4, etc 1, 2, Class Halt.
- (b) 1, 2, 3, 4, 5, 6, 7, 8; 1, 2, 3, 4, 5, 6, 7, 8; etc 1, 2, 3, 4, 5, 6, Class Halt.
- (c) 1, 2, 3, 4, 5, 6, 7, 8; 8, 7, 6, 5, 4, 3, Class Halt.
- (d) 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, Class Halt.

Of these above ways of counting, the first two (viz a & b) are desirable because the whole class is kept in suspense till coming to a halt.

Note:- There are many exercises involving movements on the left side as well as on the right side. In case the exercise is to be changed from left to right during rhythmic counting, the command "Right—Change" is to be given instead of the last two counts of the exercise done on the left. Similarly to perform the exercise alternately on the left as well as on the right, the command "Alter—nate" should be given instead of the last two counts of the exercises and alternating form parts of rhythmic counting for the exercises that may involve movements on left and right.

Whenever series of exercises are done continuously and rhythmically, the change from one exerise to another exercise should be indicated by the command "Next -Change" instead of the last two counts.



UNIT - III : TEACHING AIDS

Teaching Aids

Teaching aids arouse the interest of learners and help the teachers explain the concepts easily. They make learning easy, effective and interesting. There are audiovisual aids such as blackboard, maps, charts, globes, pictures, etc., which are traditional in nature. Nowadays electronic media have come in a big way and are apt to influence not only communication and education, but also the manner and behaviour, lifestyle, attitudes, and interests of the clientele. These media and materials provide direct as well as vicarious or improvised learning experiences to the students at all levels of education. These include traditional aids as well as electronic media evolved from time to time in la variety and great novelty.

Learning becomes effective when students are actively involved in the process. To the extent his different senses are related, his learning becomes successful to that extent. For using various senses in the teaching-learning process, different materials are utilised in the classrooms. The learning experiences are thus made quite relevant, meaningful and effective. That is why, these aids are called 'multi-sensory materials', or 'instructional aids' or 'instructional materials.' These materials mainly being of two kinds, audio and visual, they are known as 'audio-visual aids' or A-V materials. As these aids are to be used as an integral part of the entire learning situation and are not just ancillary or supplementary, many educators are not happy with the terms 'aids'. Therefore, the term 'material' is safely used and sometimes the term, 'technique' is also used to mean how these ma . ials can be used.

Main Aims

After going through the module, you will be able to

- know the role and importance of audio-visual teaching aids
- classify teaching aids on the basis of their characteristics
- acquaint yourself with the various uses and applications of these aids
- enlist a number of guidelines for preparation of some selected teaching aids viz charts, models, slides, transparencies and cartoons.

Audio-Visual Aids in Education

Audio-visual aids or devices or technological media or learning devices are added devices that help the teacher to clarify, establish, prelate and co-ordinate accurate concepts, interpretations and appreciations and enable him to make learning more concrete, effective, interesting, inspirational, meaningful and vivid. They help in completing the triangular process of learning viz., motivation- clarification-stimulation.

CHALK BOARD

WHAT:

The chalkboard, displayed prominently in most classrooms, is an excellent and inexpensive aid to instruction. Used essentially as an aid to visual presentation, the chalkboard plays an essential role in the logistics of teaching to a large group.

HOW:

- 1. Once it has been assured that all students can see the board from then-seats the teacher has a lot of freedom in making the most of the chalkboard space. In any case the teacher must print, write and/or draw in such a fashion that is legible and large enough that it can be seen.
- 2. Any text and/or numerals must be written with white or yellow chalk. Avoid using rainbow colours for textural display. Coloured chalk is good for illustrations and graphs. The teacher should test which colours show up well and which ones do not prior to the lesson.
- 3. If the chalkboard is to be used as a visual aid to a lecture the following rules should be considered:
 - a) The teacher should avoid copying his/her lecture notes on the chalkboard for the students to copy. They will be so busy copying notes that they will not have a chance to listen to and assimilate the lecture. Therefore, only the main points of the lecture should be copied down.
 - b) The teacher should use the board to write down new vocabulary words which come up in the lecture.
 - c) If any material is to be copied off the board, the teacher must allow adequate time. The teacher should not keep students in during recess or after school to copy notes if there were not sufficient time.

Techniques of Teaching

- a) They should be varied.
- b) They should fit into the existing curriculum.
- c) They should be adaptable, versatile, and flexible.
- d) They must be effective.
- e) They should promote involvement in world affairs.

TEAM TEACHING

WHAT:

Discussion involves a cooperative effort to solve problems. During the discussion process, students are given the opportunity to express their opinions and receive feedback. Students are not encouraged to simply passively accept what they hear. Discussion involves an organized but free exchange of ideas.

HOW:

- 1. If at all possible, the desks should be arranged so that students face each other and keep eye contact while discussing the topic.
- 2. Smaller groups may be formed within the whole class group. A leader and recorder may be assigned or chosen for each group. The leader directs cooperation within the group but does not influence the group decision. Sometimes an encourager is also needed in the group.

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- 3. Group members should have a logical plan of attacking a problem such as:
 - a) Recognition of a problem.
 - b) Analysis of the problem.
 - c) Brainstorming solutions.
 - d) Analysis of consequences to the proposed solutions.
 - e) Verification of consequences.
- 4. The teacher/leader should write the question/problem to be discussed on the blackboard or overhead so that it is clearly visible for the duration of the discussion. The problem must be phrased so that a "yes/no" answer is not adequate.
- 5. The teacher should ensure that all the relevant facts have been considered.
- 6. The teacher must give small groups sufficient time to thoroughly /discuss and analyze the problem.
- 7. Recorders should be instructed to record all points without bias.
- 8. Once individual groups are ready, the teacher should record all points/ possible solutions from all groups on the blackboard.

MODELS

WHAT:

Models are mainly representations, copies or images of real objects. They can be used to represent objectives, systems, concepts or ideas. Models may be concrete or two/three dimensional. Globes are common models found in the classroom.

Models are of several different types. The scale models of such bjects as cars, buses, airplanes, houses, wagons, ships are used to show the exterior form and shape of the original object Working models show the operation of the various parts of the object

Using models as a teaching technique is highly motivating for students. Commercially produced models can be bought Models may also be produced by teachers as well as students. Models can be used in all subjects and at all levels. Creating models is also correlating art with social studies, science or any other subject. Models can be profitably used for hands-on learning experiences.

HOW:

- 1. Teachers can use models to demonstrate an idea or concept to their students.
- 2. Students can create models to illustrate their understanding of what is being taught Some students can produce models in industrial arts classes.
- 3. Models can be displayed in various formats around the classroom.
- 4. Models are also important for teaching disabled students through the tactile or visual experiences.
- 5. The sectional type model can be dismantled to show the inner details (the model of the brain). Students can examine the parts and more questions could follow.
- 6. Many real items cannot be brought to the classroom but models can substitute for the real objects.

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MOTION PICTURES

What

The motion picture is unique in its ability to teach certain concepts because of the following important characteristics :

- a) It displays action. Because certain concepts involve motion it is utile to use a teaching aid which is unable to show action.
- b) Sound and special effects can help to stir emotions and general attitudes toward specific issues.
- c) Special effects (time-lapse photography) can help us see things we could not otherwise experience.
- d) It can give us a real sense of the past.

How

- 1. The teacher must have a purpose for showing a film. There should be something about the film which enhances and enriches the lesson.
- 2. The teacher must choose a film. It takes care and good critical judgment to choose an appropriate film. Check film libraries and video stores.
- 3. Order/reserve the film as early as possible.
- 4. The teacher must preview the film before showing it to the class.
- 5. Once the validity of the film has been confirmed it should be introduced to the class.
- 6. Before class, all equipment must be checked and the film loaded so that it is ready to go. The screen and desks must be arranged to ensure maximum viewing by all students All distractions should be removed from the classroom.
- 7. The teacher and students should then formulate some questions for discussion.
- 8. After the film has been viewed, discussion and culminating activities are essential.

OVERHEAD PROJECTOR

WHAT

The overhead projector (OHP) is a popular teaching tool. Its primary function is to project still images (either teacher, student or commercially made) onto a flat vertical surface like a wall. The image to be projected on the wall is drawn or transferred on a standard sized (20cm x 30cm) overhead projector transparency (a kind of clear plastic paper). The transparency is placed on the OHP surface and after focusing, the clear image is magnified and projected on the screen/wall.

HOW:

- 1. The teacher should have all transparencies to be used during a particular lesson ready and in the correct order.
- 2. The teacher should ensure that the OHP is in proper working order prior to its use during a lesson.

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- 3. The first transparency should be ready for viewing before the lesson begins. The teacher need only turn on the OHP at the appropriate time. The image will be adequately magnified and focused so that the teacher will not have to interrupt the lesson.
- 4. The teacher should stand next to the OHP facing the class. He/she can refer to the transparency while students refer to the projected image.
- 5. The teacher should use a pen or similar object as a pointer and point to particular areas on the transparency without getting his/her hand in the way. If the pointer is placed on the transparency it is projected clearly on the screen/wall as well.
- 6. When the transparency is no longer applicable to the particular part of the lesson the OPH light should be turned off to avoid distraction and the next transparency placed on the OHP which will be turned back on at the appropriate time.

VERBAL

WHAT:

The lecture technique, whereby the teacher talks while students listen and make notes, has been praised and criticized. It is agreed, however, that in order for lecturing to be effective, there must be communication between the teacher and students. The teacher should organize his/her lecture in such a way that students take an active role in the learning process.

HOW:

- 1. Decide on a specific topic. It must not be too general or the teacher will not be able to cover it effectively in the allotted time.
- 2. Decide on objectives. What should the students get out of the lecture?
- 3. Research the topic if necessary.
- 4. Prepare a lesson plan.
- 5. Before beginning the lecture, ensure that all students are attentive.
- 6. Stimulate interest in the topic immediately. Begin with an amusing anecdote or a controversial piece of related information, for example.
- 7. Outline the main points at the beginning and the end of the lecture.
- 8. Periodically ask students if they have any questions.
- 9. Speak loudly and clearly.
- 10. Make eye contact with the audience.
- 11. Review the main points at the end of the lecture.

LESSON PLANNING AND TEACHING INNOVATIONS

LESSON PLAN

A lesson plan is the teacher's guide where the subject matter to be taught is selected and sifted in a cogent and progressive manner.

Values of a lesson plan

- 1. It is the instrument which guides the teacher in teaching a subject or activity.
- 2. It gives confidence to the teacher in handling the class and he is able to cope up with the problems that arise in the class.
- 3. It helps the teacher to be very fluent and more convincing in his teaching.
- 4. It avoids vagueness and prevents the teacher from going out of the subject matter to be taught.
- 5. It helps the teacher in fixing the portion of subject matter to be taught within the time at his disposal.

A lesson runs smoothly if planning is done properly. In the absence of a proper lesson plan, teaching is ill-done. Hence there is a need for a Lesson Plan.

Not all teachers do write daily lesson plans. It is felt by expert that the lesson should develop in the class itself and that it is a waste of time and energy to prepare fixed lesson plans. Though this may ideally be correct, it must be remembered that the preparation of lesson plan beforehand avoids vagueness and ambiguity. A novice should necessarily write a lesson plan in a detailed and descriptive manner. An experienced teacher may jot down only points which may be called as Teaching Hints or he may have a clear mental picture of the lesson to be taught without any written notes.

In the preparation of the lesson plan, the following points should never be lost sight of

- i. The content of the lesson plan should lead to some definite objective or purpose
- ii. The activities chosen for the lesson should not only be suitable to the concerned age groups but also be meaningful to the changing situations.
- iii. The lesson plan must be flexible and not rigid. It must be adaptable to the changing situations.
- iv. There should be progression in a lesson and from lesson to lesson. Proceed from simple to complex, known to unknown and concrete to abstract.

TYPES OF LESSON PLAN

b)

Particular lesson

The lesson plan (for physical activities) may be of Two Types.

- a) General lesson plan
- A. General Lesson Plan

The lesson should essentially consist of

- (1) Introductory activities or warming-up,
- (2) Formal activities
- (3) Recreative activities.

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1. Introductory activities(Warming-up)

A certain amount of warming-up is essential before indulging in any vigorous activity to avoid muscle pull or catch. The warming up shall consist of a few informal activities like running, hopping jumping, skipping, imitation of the animals locomotives, etc., which are to be started in a slower rhythm and finished with a faster rhythm. About ½ of the total time of the period may conveniently be devoted to warming-up. It must be particularly noted that the entire class is fully engaged in warming-up.

2. Formal activities

Formal activities form an important part in a lesson because of their high physiological values. They develop and maintain body control, body suppleness, good posture and graceful carriage of the body. These activities are done to commands. They include body-building exercises of free arm type, dumb-bell and wand exercises. Some of the ordinary Dands and Baithaks may also be included under Formal activities, if necessary. ¹/₄ of the total time of the period is to be utilised for the formal activities.

3. Recreative activities

These consist of a variety of minor games, lead-up games, story plays, simple stunts and combats, relays, etc. No lesson is complete without recreative activities because, they not only develop the natural skills but also provide fun, pleasure and enjoyment to the participants. Therefore ½ of the total time must essentially be devoted for these activities.

The introductory part, formal part and recreative part form the essential parts of a general lesson. Apart from these, some special activities which do not require much time may also be conveniently included in the lesson; for example, simple Pyramids and Tumbling Marching, Rhythmics, Club drill, Pole drill, Log drill and indigenous execises like Asanas. Suryanamaskars etc. Teaching of the skills of Swimming, Boxing, Wrestling, Heavy apparatus, fundamental skills of Major games and techniques of Track and Field Athletics requires greater amount of time. They have to be taught separately under a particular lesson. When once they were, already taught, any of them may suitably be brought under special activities in the general lesson for further practice.

The special activities may be conducted after the formal activities and before the recreative activities. It is not imperative to include special activities in every general lessons; if included, about 1/6 of the total time may be utilized in which case the timing of the other parts may be slightly altered.

As a part of the class management, the Assembly and Roll Call of the students at the beginning of the lesson and the Assembly and Dismissal of the students at the end of the lesson form the regular class routine. Therefore, they are not the actual parts of the lesson plan. Anyhow for the purpose of our convenience this class routine, for which 1/8 of the total time can be devoted, may also be taken as the part of a lesson(As per the class routine, at the beginning of the lesson the students will assemble in a definite formation when the attendance is taken in an orderly manner. At the end of the recreative activities, all the equipments are gathered and kept in the appointed place after which the students assemble for orderly dismissal. The teacher may give suggestions and necessary

The following are the parts of a general lesson.

- 1. Assembly and roll call
- 2. Introductory part
- 3. Formal part

- 4. Special part
- 5. Recreative part
- 6. Assembly and dismissal

MODEL FOR A GENERAL LESSON PLAN

Class	:	VII Standard
Time	:	45 minutes
Equipment	:	Folded papers or leaves; Chunnam.

	Subject Matter	Method
1.	Assembly and Roll Call(2 mts)	Students fall in a line and then the attendance is taken.
2.	Introductory or Warming-up part (5 mts)	Students will be divided into groups each occupying a corner. On signal, the group in corner I will have to do Jumping jack: in corner 2 running on the spot; in corner 3 hopping on the spot and in corner 4 ordinary baithak. On next signal the groups should change their corners in a particular order and do the activity fixed for that corner. Every group must get a chance to do the activity in every corner.
3.	Formal part (10 mts)	
	 i) Arms forward upward and heelRaise ii) Arms sideward and full kneeRaise 	(a) Class formation: The open order formation shall be made from a single line by conveniently numbering the students according to the strength of the class and allowing ample space among them. The
	iii) Arms upward and kneesBend	teacher shall so station himself that he can see all and be seen by all.
	iv) Arms forward downward and heelsSink	(b) Demonstration: The exercise shall properly be demonstrated by the teacher with due explanation
		(c) Teaching by Counts:
		The demonstrated exercise shall be taught by counts. (Hold each position and correct the mistakes.)
		(d) Doing Continuously and Rhythmically :
		After teaching by counts, the exercise shall be done a few times for physiological effects.
		After the exercise, the students will be brought back to single line.
4.	Special part (8 mts) HALASANA Starting position	The class formation shall be semi-circular formation allowing ample space for each student.
	Supine position	The Asana should be demonstrated properly according to the
	(i) Keeping hands close to the body and raising legs to 90°	counts emphasizing the accuracy and precision of each position. The students shall be made to do the asana by counts.

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	 (ii) Legs reaching as far back over the head as possible and touching the ground with toes iii) Returning to count I position iv) Returning to starting position 	Corrections are made then and there. The asana shall be done only in slow counts.
5.	Recreative part (18 mts) PLUCKING THE TAIL Every one will be having something as a tail which should be plucked by other. (If time permits a few more minor games may be played)	 Students have to keep a folded paper or a leaf as a tail at their waist. They shall station themselves in a limited area. On signal each one must try to pluck the tail of others while guarding his own tail. The boy who remains till the end without losing his tail is the winner. This is a mass game. The following rules have to be explained. i) No one should go out of the limited area; if so, he will be eliminated. ii) One should not hold his tail with his own hand for the purpose of guarding it. iii) One who has lost his tail will be eliminated. iv) No rough tactics shall be allowed.
6.	Assembly and Dismissal (2mts)	After the recreative activities the students will be made to assemble and fall in a line. On dismissal they have to shout once "JAI HIND' and disperse. Instructions before dismissing the class).

B. Particular Lesson Plan

This lesson plan is intended for teaching the skills of Major games, the techniques for Track and Field athletics etc. The parts of the particular lesson plan depend upon the activity.

For example, we give below the parts of the lesson for Major games and Track and field athletics and model lesson plan for each.

Parts of the Lesson plan for a Major game:

- 1. Assembly and roll call
- 2. Suitable warming up activities
- 3. Teaching of fundamentals
- 4. Practice of fundamentals

Parts of the Lesson plan for a Track and Field Event:

- 1. Assembly and roll call
- 2. Suitable conditioning exercises as warming-up
- 3. Teaching of the Technique

- 5. Lead-up activities
- 6. Whole game(if time permits)
- 7. Assembly and dismissal..
- 4. Practising the technique
- 5. Group competition(if time permits)
- 6. Assembly and dismissal.

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MODEL LESSON PLAN FOR A MAJOR GAME

Class	:	IX Standard
Time	:	45 minutes
Game	:	Foot ball
Equipment	:	6 Foot-balls and Indian clubs; Chunnam

	Subject Matter	Method
1.	Assembly and Roll Call (2 mts)	Students fall in a line and then the attendance is taken.
2.	Suitable warming up (5mts)	Running slow and fast - arm swimming (forward, upward, downward, backward, sideward & circular movement) - Leg swinging (forward, backward, sideward & circular movement) - Trunk bending exercises -Jumping and vaulting exercises or a few warming up exercises followed by a preliminary game.
3.	Teaching of Fundamentals (8 mts) DRIBBLING	Demonstration: Students shall be made to stand in a proper formation so that they can watch the teacher's demonstration. The teacher should properly demonstrate dribbling of the ball with adequate explanation emphasizing the following points, (i) Dribbling is a series of short taps of the ball from one foot to the other, (ii) Propel the ball with the inside of the foot (iii) The ball shall always be kept close to the dribbler, say about a yard, (iv) Dribble straight (v) Lean forward while dribbling the ball.
4.	Practice of Fundamental(15 mts)	The class is divided into six groups, each being provided with a ball for practice in dribbling. The teacher observes their performance and moves from group to group rectifying the mistakes.
5.	Lead-up activity (10 mts) FOOT BALL Dribble Relay X X X	After practicing for a while, the groups are made to compete with one another through a lead-up activity (i.e., Football dribble relay. The groups are made to stand in six files. The ball is kept in a circle in front of each file. From each On signal the first boy in each group is to dribble the ball round the club kept in front of his group and leave the ball in the circle from where he started. Similarly, all the other have to dribble. The group that finishes first shall be declared the winner.
6.	Whole Game (if time permits)	After the lead-up activity the students may be made to play a regular game
7.	Assembly and Dismissal (5 mts)	After the game, the students are assembled and dismissed after having discussed for a while the day's lesson.

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MODEL LESSON PLAN FOR A TRACK AND FILED EVENT

Class	VIII Standard	
Time	45 Minutes	
Event	Sprint : (Start)	
Equipment	Starting blocks, nails, hammer, chunnam, Measurir	ng tape etc.

\square	Subject Matter	Method
1.	Assembly and Roll Call (2 mts)	Students fall in a line and then attendance is taken
2.	Suitable Warming up (10mts)	Walking-jogging-fast running-jogging-walking-jogging and sprinting (2 laps) Feet astride and arms sideward Trunk bending and opposite arm and toe touching - Trunk twisting - Trunk rotation or Circumduction etc.
3.	Teaching of the Technique; (14 mts) CROUCH START (medium)	Demonstration: The students in a loose group observe the teacher's demonstration. The teacher with due explanation will demonstrate the medium Start as follows: 1. The demonstration must first be shown without a starting line.
		 Usually the take-off foot shall be the front foot and the other rear foot in "On your marks" position.
		3."On your marks" position(for medium start. a. Stand at attention.
		b. The knee of the rear foot shall be placed in line with either the toe of the front foot or the front arch of front foot, in a kneeling position.
		c. The hands shall be placed on the ground, shoulder-width apart, ahead of the front foot at a convenient distance.
		d. The hand should form a triangle on the ground, the thumb and the fingers partially bearing the weight of the body.
		e. Then draw a line just in front of the hands and determine the distance between this line and the front foot. The students are asked to take "On your marks" position (without a line). The teacher goes round and rectifies the faulty positions after which a line is drawn just in front of their hands. Then each student determines the distance between the line and his front foot.
		4. "Set" position.
		a. From "On your marks" position the hips are lifted slightly above the level of the shoulder.

		b. The shoulders come in front of the hands since the body leans forward and the body weight is shifted to the hands - Head and neck relaxed - elbows straight - rear leg bent - body quite still.
		The students are asked to take the "Set" position from their respective "On your marks" position. The teacher has to rectify the faulty positions. Any adjustments, if necessary, regarding the distance between the line drawn in front of the hands and the front foot, may be made so as to suit the convenience of the individuals. The distance finally determined by each student shall be the distance that he is to take for his start from the starting line.
		5. Gun:
		a. From the "set" position (on the firing of the gun) the runner must dash forward with a forcible leg drive.
		b. The first stride is made by the rear leg with a forward swing of the opposite arm. The first stride should be short.
		c. The runner should not assume the normal running position too soon. The students will be assembled at the starting line. They will be divided into batches of four or five. Each batch will be asked to assume the "On your marks" position at the starting line.
		Then on the command "Set" they have go assume the "Set" position. Instead of the firing of the gun the teacher may say "Go" after which the students dash forward with proper drive and run a little distance The teacher will have to observe the performance of the students and rectify the mistakes then and there. Thus every batch will be made to perform. Then teacher can show the students how to use starting block.
4.	Practising the Technique (14 mts)	The entire class may be divided into a few group will be occupying a corner of the field where they will practice the technique taught top them. The teacher will move from one group to another supervising and guiding the students.
5.	Competition (if time permits)	After practice, suitable competition may be conducted.
6.	Assembly and Dismissal	At the end, the students are assembled and after a few remarks regarding the day's lesson the class is dismissed. For dismissal, all the students may be asked to take a start from a single line and run away.

Note: (1)

Each of the model lesson plans given above is for the instruction period of a particular class. It is expected of the students to practice the activities already taught in the Instruction period during their Participation period. In order to find their mastery over the exercise or the skill, it is the general procedure to make the students repeat the exercise of the skill when they report on a subsequent day for instruction period. This revision of an exercise or skill may be done immediately after the introductory part is over, in which case the time allotted for each of the other parts of the lesson is to be suitably modified.

(2) The Handbook on "The National Fitness Corps" syllabus for schools published by the Ministry of Education, Government of India in 1965 had suggested the following time allotment during each period of 35 minutes or 40 minutes.

1.	One exercise table	4 to 7 minutes	7 to 8 minutes
2.	Activity (Main Unit)	25 minutes	25 minutes
3.	Minor games/Relays	6 to 3 minutes	8 to 7 minutes

In case the period is of 45 minutes duration, the main unit may cover about 30 minutes.

MICRO TEACHING

Introduction

The quality of education that is provided to our children depends on the quality of our teachers. The quality of teachers, in turn, definitely depends on the way in which they had received training through teacher's training institutions. The question that immediately arises now is about the teacher education programme. Hence, we must take a peep into this programme. The need of planning is essential. If our teachers are going to shape the destiny of our country, teacher education has to assume a great responsibility and has to take recourse, to some innovative and effective technique of training teachers.

Definition of Micro Teaching

Micro teaching is a procedure in which a pupil teacher practice teaching with a reduced number of pupils in a reduced period of time with emphasis on a narrow and specific teaching skill. Thus micro-teaching is a scaled-down encounter in class Size and class time. It is, therefore a skill based approach to teacher training.

Accordingly, this technique is mainly for developing certaih skills of teaching procedure, which contains the following steps:

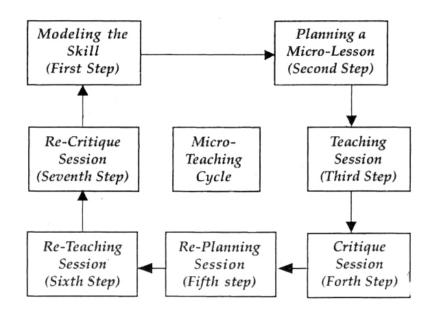
- 1. Modeling the skill.
- 2. Planning a micro-lesson.
- 3. The teaching session.

- 5. The re-planning session.
- 6. The re-teach session.
- 7. The re-critique session.

4. The critique session.

The Seven Steps in Micro-Teaching

The micro-teaching is caring seven important steps which are related with the microteaching and without these steps we cannot complete the micro-teaching process. These steps are as follows:



Planning Session, Teaching Session, Critique Session, Re-Planning Session, Re-Teaching Session, Re-Critique Session and Re-Planning Session form one complete cycle of micro-teaching procedure. This cycle may be repeated according to the necessity of improvement.

Simulation-Teaching

Simulation is nothing but an artificial creation. It is a sort tailor-made situation, which is as realistic as possible; and this is done by breaking down a difficult or complex system Into several sub-systems. The best examples of this may be quoted by describing the instances of astronauts or army people.

Positive Aspects of Micro-teaching

- (1) There comes a major awareness to pupil teachers with regard to professional training.
- (2) There is more scope for practice in teaching skills according to the student's potential.
- (3) It develops confidence by having the practice of skills in micro-teaching under simulated conditions.
- (4) It creates more general teaching competence among the pupil-teachers.
- (5) It allows for different strategies for supervisory feedback.
- (6) Micro-teaching helps to identify categories in which additional research is needed.
- (7) Micro-teaching helps in improving the methods of criticizing student's performance.
- (8) It determines the length of training time required to master certain skills.
- (9) Micro-teaching helps in improving the ways of analyzing pupil learning.
- (10) Micro-teaching focuses attention on teacher behaviour.

Limitations

(1) Administrative difficulty. No school will readiy allow having only 5 to 10 pupils from each class for practicing a micro-lesson.



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- (2) Lack of material resources and trained supervisors.
- (3) Cannot be a substitute for real classroom lesson.
- (4) Sufficient literature on micro-teaching is not yet a vaiable. For example there are no books on micro-teaching in Hindi, Gujarati, Kannada, Sindhi, Tamil, etc.
- (5) Micro-teaching under simulated conditions does not affect the development of general teaching competence.
- (6) Teaching cannot be broken down into subcomponents as they lose meaning in isolation and teaching is not a combination of these isolated bits.
- (7) Teaching task is not to produce skills as an end in themselves but as a means to an end.
- (8) Teaching is not just a summation of teaching skills.

TEACHING OE ACTIVITIES

A. CALLISTHENICS

"Callisthenics" means body-building exercises of free arm type. Exercises with light apparatus like dumbbells, wands etc., may also be included in callisthenics.

Callisthenics may be divided into Formal and Informal.

Formal exercises are done to counts and commands and they are used for pupils of the Secondary school stage. Informal exercises are not done to counts and commands as they are intended for children of the primary school stage. They are done by way of imitation, dramatization etc.

To teach exercises effectively, formation of the class and method of teaching are absolutely necessary.

METHOD OF ARRANGING THE CLASS FOR FORMAL EXERCISES

Usually the class formation (i. e. open order formation) for formal exercises will be made cither from Rank or from File. There are a few preliminaries to be gone through before the open order formation is done.

Preliminaries for Rank.

1. Class, in a line FALL IN

(On this command, the students FT in a line according to their height (shortest on their right) and remain in stand-at-ease position.)

- Allen TION.
 (On this command, they stand erect feet together and arms kept close to the body.)
- 3. Right DRESS.

(On this command, all the students except the first boy at the right end of the jlinc turn their heads to their right and dress up to straighten the line.)

4. Eyes FRONT.

(On this command, they turn their heads to the front and look straight. This command should be given only after the line is completely dressed up.)

Preliminaries for File.

1. Class, in a file FALL IN.

(On this command, all the students fall in a file according to their height (shortest in front) and remain in stand-at-ease position.)

2. Atten TION.

(On this command, they stand erect — feet together and arms kept close to the body.)

3. Forward DRESS.

(On this command, all the students except the front boy should raise their right arms forward and dress up to straighten the file).

4. Arms SINK.

(On this command, they drop down their arms This command should be given only after the file is completely dressed up.)

OPEN ORDER FORMATION

From a Single Rank or Line.

Method I.

After the preliminaries, adopt the following procedure;

i. Prom the right in threes COUNT.

(On this command, the students start counting in threes from the right end of the line. Each student should turn his head towards his left and utter the number sharply and smartly.)

ii Number ones stay where you are, number twos two steps and number threes four steps; open order forward MARCH.

(On this command, number ones stand still while number twos and threes march forward two steps and four steps respectively. As they march, the teacher must count the steps in proper rhythm. The count shall always be n + 1, where "n" indicates the number of steps.

Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
1			1			1			1		
	2			2			2			2	
		3			3			3			3

Method: 2

- i. From the right in threes COUNT.
- ii. Number ones stay where you are, number twos two steps forward and number threes two steps backward; open order MARCH.

		3			3			3			3
Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х	Х
1			1			1			1		
	2			2			2			2	

From a Double Rank or Line.

(Here the students fall in two lines according to their height. Both lines are close to each other.) After the preliminaries, the following procedure may be adopted.

Method I.

- I. Both lines from the right in threes COUNT.

(On this command, when the lines take three steps forward and backward respectively, the steps shall be counted upto 4 (i. c. n + l). F-'ollowing this a separate counting should be made for the steps taken by numbers twos & threes (i. e. n + 1 - 5 counts.)

a.	1 x	2 x	3 x	1 x	2 x	3 x	1 x	 	3 x	1 x	2 x	3 x
	x 1	x 2	x 3	x 1	x 2	x 3	x 1	x 2	x 3	x 1	x 2	x 3
b.	x 1	x 2	x 3	x 1	x 2	x 3	x 1	x 3	x 3	x 1	x 2	x 3
	x 1	x 2	x 3	x 1	x 2	x 3	x 1	x 2	x 3	x 1	x 2	x 3

Material: 2

- i. Both lines from the right in threes-....COUNT.

a.	1	2	3	1	2	3	1	2	3	1	2	3
	х	Х	Х	Х	Х	х	х	Х	х	Х	х	х

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	x 1	x 2	x 3	x 1	x 2	x 3	x 1	x 2	 	x 1	x 2	x 3
b.			3			3			3			3
			I						I			
	Х	х	х	Х	х	х	х	х	х	х	х	Х
	1	Ι		1			1	I		1		
		2			2			2			2	
			3			3			3			3
			5			J			5			5
	Х	Х	x	Х	Х	X	Х	Х	X	Х	Х	X
	1		~	1		~	1		~	1		~
	•	2		·	2		•	2		•	2	

From single Line

After all preliminaries, adopt the following procedure:

i. From the front in threes COUNT.

ii. Number ones stay where you are, number Twos 2 steps to the left and number Threes 2 steps to the right STEP.

(Even the command 'Open order March' may be used).

(On this command, number ones stand still, number twos will take two steps left sideward and number threes will take two steps right sideward).

[Note : Whenever the students step sideward, for each step there shall be two counts.]

From more than Single file.

The files should be stationed at required intervals. After the preliminaries, the same commands given for single file should be adopted. Each file will open out as shown for single file.

3	х	3 x		3	- x	3 x		
	x 2		x 2		x 2		x 2	
	x1		x1		x1		x1	
3	x	3 x		3 x		3	x	
	x 2		x 2		x 2		x 2	
	x1		z1		x1		x1	

(N. B:- The methods mentioned above are a few examples. Any other method of open order formation may be adopted, if necessary.)

From the open order formation (after the formal exercises) to bring the class back to its original position the following command should be given.

"Close order MARCH"

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(On this command, the pupils march forward, backward or sideward, as the case may be, and come to their original position.)

After having dealt with in detail the various methods of open order formation, let us deal with the teaching of a formal exercise.

THE STAGES OF TEACHING A FORMAL EXERCISE

There are 3 stages that have to be gone through in the process of teaching an exercise.

Stage i. Giving the class a clear mental picture of the Exercise.

This can be brought about by means of demonstration of the exercise by the teacher with a brief explanation. Before demonstrating the exercise the teacher should see that the students arc in 'stand-at-easc' position. W henev er an exercise involves movements on the left as well as on the right, the teacher should demonstrate it on his tight, if the students have to do it on their left and vice versa. During the demonstration the teacher must emphasise each position of the exercise and hold it long enough to enable the students to form a mental picture of the exercise.

Stage ii. Making the students acquire correct positions of tlic Exercise.

After having given a clear mental picture of the exercise the teacher should bring the class to "Attention" and then make the students do each movement of the exercise "By Counts". At each count the students take the required position. The teacher should rectify the faults committed by the students. After satisfying himself with the correctness of the position acquired by the students, the teacher should proceed to the next count. He should teach the positions of the exercise by counts until the students learn to do the correct positions of the exercise.

Stage iii. Repeating the exercise continuously and rhythmically for physiological effects.

Having made the studei tv acquire the correct positions of the exercise they should be made to repeat the exercise continuously and rhythmically for physiological effects.

Note:—To teach an exercise involving movements on the left as well as on the right, the following procedure is adopted:

- a. Teach it by counts on the left and then repeat it rhythmically.
- b. Then teach the same by counts on the right and repeat it rhythmically.
- c. Afterwards, teach it by counts on both sides alternately and repeat it rhythmically.
- d. Finally, make the boys do the exercise continuously and rhythmically on the left, on the right and on both sides alternately.

B. INDIGENOUS ACTIVITIES

Indigene us activities may be studied under the following heads.

- 1. Exercises:
 - a. Without apparatus (Dands and Baithaks.)
 - b. With apparatus (Heavy clubs.)
 - c. On apparatus (Malkhamb)
- 2. Yogic system of Physical Culture:
 - a. Asanas.
 - b. Suryanamaskars.
- 3. Games: (Kabaddi, Kho-Kho, Atya-Patya)
- 4. Rhythmics: (Lezium, Dance etc.)
- 5. Defensive arts: (Lathi, Wrestling etc)

(The methods of teaching of the items 3, 4 and 5 are dealt with under Major games, Rhythmic activities and Defensive arts respectively).

Let us here deal with the teaching of the items 1 & 2

1. Exercises

a. Dands and Baithaks:

Dands and Baithaks are done to strengthen the arms and the legs respectively. They are the best conditioning exercises for wrestling. Dands and Baithaks are individualistic in nature and they are usually performed as many times as possible. Since the exercises are strenuous in nature, they may be introduced to the students of the Secondary School S-nce. Though individualistic, ihey can be well taught to a group by so regulating the exercises as to be done in counts, (8 counts preferred.)

Example : STRAIGHT DIP.

Starting position : Stand at Attention

Count 1 Full squat placing the hands on the ground at shoulder width.

Count 2 Shoot the legs backward and keep the body in a straight line from head to foot in an inclined plane — arms straight and the body weight on hands and toes.



Count 3 Bend the arms at elbows and take a dip - body should not touch the ground and the weight is only on hands and toes.

Count 4 Straighten the arms and assume the position as in Count 2.

Count 5 Same as Count 3.

Count 6 Same as Count 2.

Count 7 Assume the position as in Count 1.

Count 8 Come back to the starting position.

Similarly the other Dands and baithaks may be so regulated as to be done in 8 Counts.

In choosing the exercises we have to take into consideration the age, sex and the capacities of the pupils.

Before teaching an exercise, the class must be brought into a proper formation allowing ample space between the pupils to perform the c'ercise. The teacher must demonstrate the exercise keeping each position for a fairly long time. After demonstration, the pupils are made to do the exercise Count by Count. Each position is to be held for some time and corrections made. For purpose of physiological effects the exercise may be repeated several times. But it must be noted that GENERALLY in the case of Dands and Baithaks counting must he done in a SLOWER RHYTHM.

b. Heavy Clubs :

Exercise with heavy clubs are usually done by holding a club in each hand in front of the body resting on the chest.

The teacher should demonstrate the exercise which will be followed by the pupils. The exercise is to be done by swinging the clubs alternately on the left and right. The number of swings on the left and right should be^equal. The teacher must pay individual attention and as such it is very difficult to teach it as a group activity. This should not be introduced as a compulsory activity. It may be taught only to those interested in it. Further, this activity is recommended only for senior boys.

c. Malkhamb:

Malkhamb means wrestler's pillar and the performer wrestles with the pillar by practising various holds and turns. Hence Malkhamb exercises are lead-up activities for wrestling.

Usually there are two types of Malkhamb (viz) Fixed Malkhamb and Hanging Malkhamb. At the outset the exercises have to be practised only on the fixed Malkhamb. We recommend the practice on fixed Malkhamb to the students of the Secondary school stage.

Points to be noted in teaching Malkhamb.

- i. The Malkhamb should be fixed under shade.
- ii. The floor area surrounding the Malkhamb should be level and soft.
- iii. Castor oil (not any other oil) is to be applied to the Malkhamb before use.
- iv. The participants must practise with bare body and they must wear "langote".
- v. These exercises are highly individualistic in nature and as such they will be performed one by one under the direct supervision of the teacher.

- vi. The teacher should give the students sufficient warming-up before starting the exercises on Malkhamb. The suitable warming up activities for Malkhamb are Dands and Baithaks.
- vii. The teacher should demonstrate the exercise on Malkhamb emphasizing the starling position' Pavitra" and the proper method of landing on balls and toes of the feet.
- viii. While the students are made to do the exercise one by one the teacher must always stand close by the side of the participant.
- ix. Since a beginner may find difficulties (a) in lifting the bcdy up (b) in gripping the Malkhamb by legs and (c) in landing, the teacher should give bodily support accordingly (a) by lifting the student with the help of langote (b) by pressing his thigh on the Malkhamb and at the same time supporting the shoulder and (c) by just lifting the shoulder up while landing.
- x. The exercises that are done on the right side should also be done on the left side. An exercise will be complete only if done on both sides.
- xi. Start with simple holds on the Malkhamb so that the participants may get rid of their fear. Then proceed to complex:

ADVICE:

- i. Application of too much of oil on Malkhamb during practice is to be avoided to prevent it becoming slippery.
- ii. Early morning or late evening is the best time for practice but not after meals. (Empty stomach preferred.)
- iii. Persons suffering from skin diseases Should Not be allowed to practise on Malkhamb.
- iv. After practice, keep the Malkhamb under cover.

2. Yogic System of Physical Culture.

(a) Asanas.

Asanas form a branch of the Yogic System of Physical Culture. They claim to have high Physiological and Spiritual values. Asanas can be performed by both the sex at all age levels. Asanas should be introduced to the students of Secondary School Stage. Though asanas arc individualistic in nature they can be taught to a group by so regulating the stages of each of the asanas as to be done in counts.

Asanas may be brought under 4 categories.

- i. To be performed from standing position.
- ii. To be performed from long sitting position.
- iii. To be performed from Prone position (face down)
- iv. To be performed from Supine position (face up).

Points to he noted in Teaching Asanas.

- 1. The participants should wear the minimum dress, preferably a langote.
- 2. It is better to perform the asanas on a carpet, spread on the ground.

- 3. The stomach should be empty while performing asanas.
- 4. It is advisable to perform the asanas in the mornings.
- 5. The teacher should bring the class into a proper formation (preferably semi-circular) providing enough space for each participant.
- 6. The teacher should first name the asana and then demonstrate the asana emphasising its various stages and counting each stage.
- 7. Then the teacher should make the participants take the respective stages of the concerned asana according to counts. The counting must be very slow so that all the participants can perform as far as possibe each of the required stages of the asana.
- After having attained the final stage of the asana. it may be held for some time and then the participants have to be brought back to the starting position in the reverse order by slow counts.
- (It is likely that some of the participants may not be in a position to perforin perfectly at every stage of the asana. The teacher should not apply any force to bring them to the perfect position. Perfection can be obtained only through regular and constant practice.)
- 8. As far as possible the body must be kept in a very relaxed condition while performing the asanas.
- 9. Savasna should positively be done at the end.
- 10. There should be normal breathing in almost all asanas cxecept a few like Salabasana, Uddiana and Nauli.
- 11. It is not advisable to indulge in vigorous activities immediately before of after asanas.
- 12. It is imperative that the beginners should always learn to perform the asanas under the direct guidance and supervision of the teacher.

(ii) Suryanamaskars

Suryanamaskar otherwise called Ashtanga Dand is a form of physical exercise, a treasure handed over to us by our forefathers. It is also described as Ten point way to Health, as ten movements constitute one Namaskar. Suryanamaskar exercises all parts of our body from head to foot, internal as well as external. It is an exercise as it tones up the muscles and increases blood circulation. It consists of so many Yogic Poses and strengthens the nerves. It is the Pranayama and regulates the respiratory system The Bija Mantras that are to be chanted at the beginning of every namaskar are of great scientific value as they exercise the internal organic system. Hence there is no other physical activity parallel to Suryanamaskars. It is very simple, economical, suitable for both sex and for all age levels and it requires only a very little time.

Some general instructions to be observed before doing Suryanamaskars are:-

- 1. Answer the Nature's call and your stomach must be empty while performing Suryanamaskars.
- 2. Wear as little dress as possible. (A langote will do.)
- 3. Perform the Namaskars in the open air.
- 4. The best time for Suryanamaskars is the morning twilight.

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Points to be noted in Teaching Suryanamaskars.

- i. The teacher should bring the class into proper formation providing sufficient space for each participant.
- ii. The teacher should demonstrate the Namaskar stage by stage giving a count for each stage and emphasising the correct way of performing the same.
- iii. Then the teacher should make the participants take the respective stages of the Namaskar according to counts. At the outset the counting must be very slow so that the participants can perform as far possible eacli of the required stages of the Namaskar.
- iv. Since the beginners may not be in a position to perform perfectly every stage of the Namaskar, the teacher should not apply and force to bring them to the perfect position. Perfection can be obtained only through regular and constant practice.
- V. Regulation of breathing need not be taught in the beginning stages. After the students have attained mastery over each stage of the Namaskar without confusion, breathing regulation may be introduced.

The proper way of performing Suryanamaskars

Starting Position : Stand at attention, eyes front, chest up and abdomen drawn in. Bend the arms at elbows. Bring the hands in front of your chest and press the palms against each other witli the thumbs touching the chest.

Count One : From the straight position raise the arms

forward upward maintaining the contact of palms. Press the arms backward and arch back. As you proceed from the starting position to "Count One" inhale deeply only through the nose and hold the breath.

Count Two : From "Count One" bend the body forward downward bringing the arms along with the head and keeping the knees straight. Place the hands on the ground on either side of the feet in such a way that the thumbs must be in line with toes. Press the forehead down on the knees. As you proceed from "Count One" to "Count two" breathe out.

{Note:- Beginners will find it difficult to attain this position. It does not matter much even if they are not in a position to touch the ground. This can be mastered through constant practice. But care must be taken not to bend the knees in this position).

Count Three : From "Count Two" without changing the position of the hands, bend the right knee and stretch the left leg backward in such a way that the left knee and toes shall rest on the ground. Without lifting the right heel push the chest forward and arch back pressing the head well backward. As you proceed from "Count Two" to "Count Three'4 breathe in and hold the breath.

Count Four: From "Count Three", holding breath, shift the right leg to the rear and keep it close to the left leg. Arms should be straight and the body from head to foot should be in a straight line, the weight of the body resting on hands and toes alone.

Count Five: From "Count Four", holding the breath, Hex the arms and take a dip. In this position only eight arts of the body (i e., Two feet, Two knees, Two palms, the lower y trt of the chest and the forehead) must have contact with the ground. The hips should be raised as high as possible. Having attained this position breathe out only through the nose.



Count Six: From "Count Five", straighten the arms and support the weight of your body on hands, knees and toes. Push the chest forward arching the back and pressing the head well backward. As you proceed from "Count Five" to "Count Six" inhale deeply and hold the breath.

Count Seven : From "Count Six", holding the breath, without changing the position of the hands and supporting your body weight on your hands and feet, raise the hips upward as high as possible. The heels must be in contact with the ground and .he chin must be in contact with the chest. Keeping the arms and Knees straight, press the head inward.

Count Eight : 'From "Count Seven", still holding the breath, bring the left leg forward and keeping it between the hands, take the position similar to "Count Three" (but Vice V rsa).

Count Nine : From "Count Eight", still holding the breath and bringing the right leg close to the left leg assume the position similar to "Count Two". As you proceed from "Count Eight" to "Count Nine" breathe out through the nose.

Count Ten : From "Count Nine", raise your trunk and assume the starting position. As you proceed from "Count Nine' to "Count Ten" (i. c. the starling position) breathe in only through the nose.

Thus it should be repeated scvc-al times from Count 1 to 10.

C. MARCHING

Marching must form an essential part of physical education in schools because it brings about orderliness and discipline, good posture and correct carriage of the body, rhythm and followership.

The best way of teaching Marching is by Demonstration with adequate explanation or description of the movements. There should be progression in the teaching of the movements and the part should be taught before the whole.

The progressive stages of teaching Marching are as follows

Stage i. Turns on the spot.

The students should stand in line formation (preferably in three lines) providing an arm's length between one boy and another. While the students are in stand-at-ease position, the teacher should demonstrate the turns (Right-Turn, Left-Turn, and About-Turn) in 2 counts.

For ExampleRight-Turn: On count 1 turn to the right pivoting on the right heel and on the left toes. On count 2, bring the left foot to the side of the right and assume the attention position.

After demonstration, bring the boys to attention and then give the command for the turn. Having given the command the teacher should count. As soon as count 1 is given the teacher should check and rectify the position taken by the students. Then count 2 is given to bring their feet together. The turn should be repeated several times. When it is repeated the teacher must give a pause between Count 1 and Count 2 for uniformity of action on the part of the students. The students may also be asked to count while making the turn. After having learned to turn properly the counting may be discarded. (About-turn is always right-about-turn unless otherwise commanded.)

Stage ii. Mark-time and turns during Mark-time.

In this stage the students will be taught Mark-time (i. e.) going through motions of marching without advancing. As the command "Mark-time" or "Mark-time ...March" is given, the students should start the movement on their left and the teacher should utter left, right, left, right etc., as the left or right foot beats the ground. To bring

the Mark-time to a stop, the command "Class...Halt" should be given which should start as the left foot beats the ground and should end as the right foot beats the ground. The students will take two counts to come to a halt.

Then the students must be taught the turns during Mark-time. As they make turns the teacher should count for uniformity of action. (2 counts for Right or Left-turn and 4 counts for About - turn.)

Stage iii. Advancing and retiring, moving to the left and right and wheeling.

To make the squad advance, the command "Quick-March" or "Forward-March" should be given. As soon as the command is given, the students should start with the left foot bringing the right arm forward. The teacher should utter left, right, left etc. In the quick time marching, there should be about 120 steps per minute- To bring the squad to a halt, the command "Class-Halt" should be given.

To make the squad retire while advancing, the command "About-turn" should be given. The command should start as the left foot strikes the ground and should end as the left foot ragain strikes the ground. Immediately after the command the students must check on the right foot keeping it ahead of left and make a sharp about-turn pivoting on the right foot. After this for count 1, strike the ground with the left by the side of the right foot. Then for count 2, the right foot strikes the ground by the side of the left foot. For count 3. left foot again strikes the ground by the side of the right foot. For count 4, step forward with the right foot bringing the left arm forward. Then continue marching without any waste of time. (In short, immediately after the turn pivoting on the right, mark-time for 3 counts and then for the fourth count start marching forward with the right foot.)

To make the squad move to its left while marching, the command "Left-Turn" should be given. The command should start as the left foot strikes the ground and should end as the left again strikes the ground. Immediately after the command, the students must check on the right foot keeping it just ahead of the left and make a sharp left turn. Then the left foot should be kept forward in the new direction and the m irching should be continued. If the squad is to move to its right, the command "Right-Turn" should be given. The command should start as the right foot strikes the ground and should end as the right foot again strikes the ground. Immediately after the command, the students must check on the left foot keeping it just ahead of the right and make a sharp right turn. Then the right foot should be kept forward in the new direction and the marching should be continued.

To make the squad change the direction, the Command "Right Wh-e-e-1" or "Left Wh-e-e-1" may be given. In all wheeling, as soon as the word of command is given, the pivot man of the first rank (the inner-most person on the right in the case of right-wheel and the inner-most person on the left in the case of left-wheel) would make the turn slowly, while marking time on the spot till the outermost person comes in line with him in the new direction, after which they (First rank) march forward. The other ranks also should wheel just like the first rank in the same place where the wheeling of the first rank took place.

Stage iv. Advanced movements in Marching.

When once the students learned the first Three Stages of Marching they may be taught the advanced movements in Marching viz, Double time marching, Slow time Marching, Marching with Callisthenics, Counter marching, Figure marching etc.

Note:- In slow time marching the number of steps per minute will be about 65 to 70; in quick time about 120 to 125 and in Double time about 180. In slow time marching there should be no swing of the arms and they should be kept still to the side of the body. In quick time marching the arms without being bent at elbows should be swung well forward and backward so that the hand may rise to the level of the waist. The participants will take 2 counts to come to a halt after the command "Class-Halt". In double time marching the arms must be bent at elbows and the participants will take 4 counts to come to a halt after the Command "Class-Halt".

D. MINOR GAMES

Minor games are games of low organisation which involve simple skills and a few rules. They require a few or no equipment, a little area and a short duration of time. They can be adapted to any situation and can be played by different age groups.

Minor games develop natural basic skills and provide fun and pleasure to the participants. Hence they are the best suitable recreational activities to be introduced in a general physical education lesson. Running and Tag games (Nondi Tag, Chain Tag etc.) Simple ball games (Dodge ball, Corner spry etc.), Relays (Jump the stick relay, Backward running relay etc.) and simple Stunts (Frog leap, Cart wheel etc.) come under minor games.

Before teaching the game the teacher should see that (i) the markings if any, are made (ii) the required equipments are kept ready and (iii) proper safety measures are taken.

To teach the minor games the following procedure should be adopted :

The teacher should bring the class to the desired formation and tell the name of the game and explain briefly how the game is to be played It is better to make a batch of students demonstrate, if possible, the game so that the whole class may understand the game. The teacher should see that the groups taking part in a competitive game are of equal strength. The odd or injured players may be utilized as officials. The game is to be continued as long as there is interest among the participants. If the interest in the game is waning, it should be stopped and another game started. The best principle is "Kill the game before it dies". During the conduct of the game the teacher should insist upen obedience to the rules of the game, fair play etc. To keep sustained interest in the game the teacher may also participate in the game. He must encourage the losing teams. He must constantly be watching for students who show leadership qualities and those who are mischievous so that they may be made leaders of groups.

E. MAJOR GAMES

Major games are games of high organisation which involve difficult and complicated skills and elaborate rules. They require more space and equipment and involve more time having been divided into Halves, Sets, Innings etc. There are fixed number of players for a game.

Major games satisfy the need for team games and sublimate the fighting instinct through competitive games. They develop neuro-muscular co-ordination, improvement in skills, leadership and followership qualities, sportsmanship etc.

The method adopted for teaching a major game is usually the Whole-Part-Whole method.

At the outstet the name and history of the game, the equipment required, the dimensions of the field the number of players and their positions, object of the game etc., are to be explained briefly. There should not be any lengthy discourse.

Then the teacher should make the students play the game, telling them a few rules to be observed and the fouls to be avoided. The teacher should observe their natural skill in the game. After a while the teacher should stop the game and assemble the stud;nts in the required formation to teach the fundamental skills of the game.

A major game will consist of several fundamental skills and the teacher should use his discretion in arranging them in a progressive manner so that the simple ones will be taught before the complicated skills are introduced.

The teacher should demonstrate properly and clearly the skill to be taught so that the students can have a clear understanding of the skill to be performed. After demonstration, the students are divided into several

groups, (each under a leader) and they practise the skill taught by the teacher. The teacher should move from group to group observing the performance and rectifying the mistakes committed by the students.

Then the students are assembled and they are put in a lead-up game, involving the skills taught. After the lead-up game, it is better to make the students play the whole game for a while. Finally the teacher should assemble the boys to have a group discussion regarding the day's activity.

F. RHYTHMIC ACTIVITIES

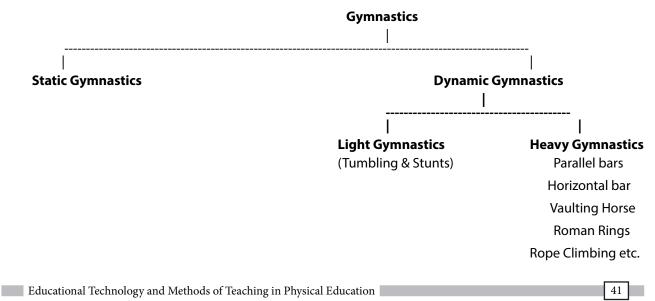
The classical dances (Bharatha Natyam, Katha Khali, Manipuri etc., Folk Dances (Xummi and Kolattam) Gymnastic dances; Lezium etc., ccme under Rhythmic Activities. To teach rhythmic activities the Progressive Part-Method is the most suitable one. In this method the activity is taught step by step. At the outset Step 1 will be taught; then Step 2; afterwards Steps 1 & 2 will be combined. Therereafter Step 3 will be taught and Steps 1, 2, & 3 will be combined and so on. In this manner all the steps of the activity will be taught in a progressive manner. Finally, the whole activity will be performed with proper co-ordination.

The teacher should possess a thorough practical knowledge of the movements of the rhythmic activity that he wants to teach. He should see that he starts with the teaching of the simple and easy movements and then proceeds to the finer movements of the activity. Hence at the outset he should teach only foot work leaving out the arm movement. Only after the students have mastered the foot work should he teach the arm movements combined with foot work. The teacher should be patient as most of the participants will find it difficult to master the movements in a short time. Only by constant practice can the mastery of the movements be obtained. All movements should first be taught to counts. After having learned the movements to counts, music may be introduced instead of counts.

G GYMNASTICS

Gymnastics are self-testing activities i. e. activities which test an individual's efficiency in handling his own body.

Gymnastics develop strength, skill, motor ability, courage, presence of mind, ability, alertness and quick reaction. Gymnastics may be classified as shown below.



Safety measures play a prominent part in teaching gymnastics. Some of the safety measures are as follows :

- i. Check-up of the apparatus.
- ii. Provision of mats.
- iii. Provision of spotters or helpers,
- iv. Provision of first-aid kit.
- v. Removal of any metallic wearing like wrist watch, ring, neck chain etc.
- vi. Avoidance of the direct focusing of the light on the face of the participants.

Teaching of Dynamic Gymnastics:

The teacher should demonstrate properly and clearly the exercise to be taught, with adequate explanation. He should then ask the students one after another to perform the exercise. The teacher should positively be by the side of the student for spotting and manual correction. Care should be taken to introduce only the simple exercises at the outset, after which the difficult ones may be introduced. In a gymnastic class discipline and orderly movement are absolutely necessary. No fooling around of the boys should be permitted since accidents may occur at any time.

When once the students have learned the movements taught, the class may be divided into squads each under a leader who is capable of spotting. Each squad may practise the simple exercises under the help of the leader. But the most difficult and complicated exercises should always be practised in the direct presence of the teacher.

When once the class is taught to perform a few exercises on different type of apparatus (for example: tumbling, rope climbing, parallel bars etc.) the class may be divided into the required number of squads each under a squad leader. Each squad may^ practise a particular type of activity for some time after which on teacher's signal the squad will change from one activity to another. Thus all the squads will get an opportunity to practise each of the activities.

Teaching of Static Gymnastics:

Pyramid building:

This is a group activity. This is the construction of symmetrical structures with human beings similar to pyramids.

As a pyramid may consist of a few layers of human beings, care must be bestowed in the selection of students for pyramid building The bottom layer should consist of hefty and strong students who can bear the weight of the upper layers. The students of middle layers should be of medium weight. The top most layer should consist of students who are alert, agile and of light weight. For the pyramid that may require hand-stand, head-stand etc., the students selected sh ould be of uniform height and size.

The following procedure is to be adopted in the construction of a pyramid.

- i. At the outset all those who are involved in a particular pyramid should stand in a line frcm where they can move quickly to take their positions without any confusion.
- ii. On signal (either counts or whistle may be used) the pyramid should be constructed part by part (ie) at first the construction of the bottom layer; next the middle layer or layers (one by one) followed by the construction of the extremities and the top.

- In its finished form the pyramid must be made to remain still for some time. There shculd be symmetry iii. and beauty in the appearance of pyramid.
- The pyramid must be dismantled in ihe re\erse order according to signals and the students should iv. re-form their original line.

ADVICE

- i. Choose the pyramids suitable to the age and capacities of the participants.
- ii. Provide mats and spotters as safety measures.

H. DEFENSIVE ARTS

I. Boxina.

Boxing is a good defensive art. It is not much recommended as an activity for competition among school pupils. But it is advisable to teach the activity so that boys can learn the skills which will be of use in life.

It develops courage, self-reliance, presence of mind, and quick reaction. It is one of the best means of giving satisfaction to the fighting instinct of human being. The boys learning boxing must be properly conditioned. They should be given exercise to develop their stamina, strength and skill in boxing. Road work (running, use of wind sprints etc.,) rope skipping, exercises for the neck, abdomen, arms etc., should be given for conditioning.

Before instruction, the class must be brought to a proper formation (line or semi-circular).

In teaching Boxing, the following procedure is to be adopted with proper demonstration and adequate explanation.

i. Teaching the Technique:

At the outset the teacher should teach the "On guard position" with proper stance to obtain body balance through correct body alignment. Here emphasis should be made on foot position, trunk control, the position of elbows, the position of hands and the position of head.

Then the teacher should teach the foot work (advancing, retreating, circling left, and circling right.) Here it should be emphasised that the body balance should be maintained and no crossing of the feet takes place while circling. Emphasis should also be made on the proper co-ordination of hands and feet during foot work. Corrections should be made then and there.

Then the teacher should teach the straight blows to head and body, together with defence. Afterwards bent arm blows to head and body together with defence may be taught. Here the emphasis should be made on the effective use of the left arm before the use of the right arm.

(The above technique must be drilled individually so that proper form may be obtained).

ii. Practice in pairs:

Stage i. Practice of a Specific Blow and Block

The students in pairs are made to practise the various blows and their blocks. (In each pair one of the boys may be numbered as No. 1 and the other as No. 2) On the command of the teacher, all number Ones will give a specific blow while all number Twos will avoid it with the specific block. On the next command, all number Twos will attack and number Ones will defend. Thus they practise several times all kinds of blows and blocks. (Care should be taken in pairing the boys according to their size and weight.)

Stage ii Practice of Defence.

When once the students have learned properly to give specific blows and the method of defending the same, all number Ones may be asked to attack with different blows while all number Twos should defend w ith suitable blocks. Then number Twos will have their turn to hit and number Ones will block.

Stage III Practice of Attack end Defence.

Here the teacher may specify the blows that should be used in the attack. Each pair will have a fight using only the specified blows, which also necessitate them to defend properly. This helps >n the development of offensive technique with defence.

Stage iv. Advanced Boxing.

Here special training is given to the participants so that they can fight freely in a competition. The participants are made to practise with Punching Bags for strength and quickness of punches. Shadow boxing, boxing before a mirror, sparring with a partner etc., will considerably improve the skill in Boxing.

ADVICE

- 1. It is essential that hands arc bandaged properly with guaze or linen bandage.
- 2. Nctcdy should be allowed to bex without gloves, which should be tied properly.
- 3. Mouth piece may be used for adequate protection.
- 4. First-aid kit should be kept ready for use.

II. Wrestling.

Wrestling is also a good defensive art like Boxing. It develops courage, self-confidence aggressiveness and quick reaction, strengthens all the muscles of the bedy and makes the internal organs fit. Wrestling may be introduced for the high school boys, but great care should be taken to see that right from the outset rough tactics are avoided.

The suitable conditioning exercises for Wrestling are dands and baithaks, malkhamb exercises, push-ups and press-ups, bridging, running, rope climbing, callisthenics, rope skipping etc.

Before teaching wrestling, the following points should be noted:

- i. Mats should be provided.
- ii. The nails of the participants should be closely clipped.
- iii. No metallic wearing or oiling of the body should be permitted.
- iv. First-aid kit should be kept ready.

The art of wrestling consists of several skills (viz) Proper stance, Take dow'ns, Holds, Counters, Escapes, Pinning etc.

After having warmed up the students with suitable conditioning exercises, the teacher may select a student (Who seems to be a little promising in this art) for the purpose of demonstrating the fundamental techniques and manoeuvres. Then on signal the students in pairs are made to perform the techniques, under the teacher's supervision. Corrections should be made then and there. The dosage given by the teacher at a time should be small and further techniques (holds, counters, escapes etc.) should be introduced only after the previous lessons are mastered.

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The teacher may introduce lead-up activities like Leg wrestling, Wand wrestling, Hand wrestling, Horse and Rider wrestling, Dog pull etc., as contests among the participants so that they may cultivate greater enthusiasm and competitive spirit in wrestling.

III. Lathi fight

Lathi fight is one of the best defensive arts. It develops courage, self confidence, presence of mind and quick reaction. The efficient and quick wrist movements involved in lathi practices are of immense help in handling the stick in the game of Hockey. As it is of great practical use in life, it may be taught to the students of the high school stage.

Before giving instructions the teacher should see that the class is brought into a definite formation allowing enough space among the participants so that when the lathi is swung it will not hurt the participants.

In teaching Lathi, the following procedure is to be adopted with correct demonstration and adequate explanation.

I. Swinging practices and foot work.

Here, the students should be taught the way of gripping the (athi, the proper method of swinging and the correct foot work. Corrections should be made then and there. The proper handling of the lathi and the correct foot work should be thoroughly mastered by the participants before proceeding to the next stage.

II. Dual Practice.

Here, the participants in pairs are made to practise the attack and defence. One boy in each pair will attack his partner with a particular stroke which should be defended by the latter and viee-versa. In this manner all strokes of attack and defence should be practised and mastered before the participants proceed for Free Fight where they can use all the techniques of attack and defence.

1. TRACK AND FIELD (ATHLETICS)

Track and field consist of the natural activities of Running, jumping and Throwing. Even though these activities are natural and can be performed by all, efficiency in performance and better results can be obtained only by hard training and proper adoption of the techniques of the concerned events. Hence the teacher should make a proper approach in teaching these events.

As each of the Track and Field events involves different types of techniques, the teacher should attempt to teach the events in a progressive manner so that effective learning takes place. The teacher should demonstrate each of the stages with adequate explanation and make the boys perform them. The teacher should observe the performance of the students from various angles and make corrections then and there. He should also use profusely teaching aids in teaching thc>e events. Ample opportunities should be given to the students for practice so that mastery of the techniques of the concerned events may be obtained.

General Advice :

- i. No event should be taught without sufficient warming up.
- ii. Sufficient safety precautions should be taken in the teaching of track and field events, especially the throwing events.
- iii. First-aid kit should be readily available.
- iv. The equipment to be used should be checked beforehand.

We give below the stages of teaching the Track and Field Athletics.

THE PROGRESSIVE STAGES OF TEACHING TRACK AND FIELD ATHLETICS

1. Sprints

- i. Suitable warming up exercises.
- ii. Running on the spot with high knee lift and proper arm action.
- iii. Pattering for about 20 yards.
- iv. Running on a straight line (drawn on the ground) to a distance of 100 yards.
- v. Running in a Track lane.
- vi. Teaching of a suitable crouch start. (Bunch or Medium or Long).
 - a. "On your Marks"

"Go" or "Gun"

b. "Set"

(Refer Lesson Plan)

- vii. Sprinting action.
- viii. Finish.

С.

2. Hurdles

- i. Suitable warming up exercises, after linding out the take-off foot of each of the participants, by making them hop.
- Hurdle Walk. (From attention position lift the leading leg forward and lake a long step; bring the trailing (take-off) leg (bent at knee) laterally at right angles to the body and place it ahead of the leading leg. Thus continue).
- iii. From attention position start with the take-olf foot and walk 3 step and for the fourth step Hurdle walk—Repeat.
- iv. Stage iii in running action. (Run 3 strides - 4th stride Hurdle run - Repeat.)
- v. Hurdling over the lines drawn on the ground. (Draw a starting line. Then draw lines parallel to the starting line at the following approximate running stride distances; (i. e.) between the 3rd and 4th; 7ih and 8th; 11th and 12th strides. The participants (one by one) should start from the starting line taking their first stride with the take-off leg. When they take the 4th, 8th and 12th strides over the lines they must make hurdle run.)
- vi. Hurdling over the grad uated heights. (Place bars at a height of 12" above the lines already drawn (as in stage V). The height of the cross bars may be increased gradually).
- vii. Hurdling over the graduated heights of bars kept at intervals of 10 yards, (only 3 strides between the bars.)
- viii. Window hurdling.
- ix. Using regular hurdles (2\$ to 3i feet height).

- x. Strides from the start to the first hurdle Strides between the hurdles.
- xi. Finish.

3. Relays

A. Non-visual Pass (4 × 100 mts. relay).

- i. Suitable warming up activity.
- ii. Method of holding the baton by the giver and by the receiver.
- iii. Walking exchange with CUE. (The participants may be divided into a convenient number of groups. The members of each group shall stand in a straight file at specific distances (about 30' to 40' between the participants). The first boy in each group is to be provided with a baton which he will hold in the left hand. On signal the first boy of each group should start walking with the natural swing of the arms towards the the second boy of his group who should place the finger tips of his right hand on the hip forming a cupped position. The second boy (receiver) should not look back. The first boy (giver) should shout "Go" when he is about two or three steps behind the receiver. On hearing this, the receiver should start walking. Meanwhile the giver should approch the receiver with his continued walk and place the baton on the right palm of the receiver who should immediately grasp the baton and then change it to his left hand and continue his walk towards the third boy. Thus it should continue.
- iv. Fast walking exchange with CUE. (Repeat Stage iii with fast walk).
- v. Slow Running exchange with CUE.
- vi Fast running exchange with CUE. (For running exchange, the distance between the participants should be increased. Here the caution word "go" should be uttered sufficiently earlier).
- vii. Running exchange without the caution word "Go" (Here the receiver should start running as soon as the giver had reached a pre-determined spot).
- viii. Practise on the track to make the exchange within the Take-over zone.

B. Visual Pass (4x400 mts. relay).

Here, the receiver should adjust his start with that of the speed of the giver and should receive the baton by turning his head and eyes to the rear aud by stretching his hand to the rear.

4. Broad Jump:

- i. Suitable warming up exercises.
- ii. Jumping with slow run. (Here the participants lake a little run and make a broad jump (in their own style) from a take-off line drawn at a distance of 8' from the pit. During the flight in the air they should be asked not to look down).
- iii. Heading Broad Jump. (The polevault uprights may be placed on either side of the pit and a Volleyball bladder (inflated) may be suspended from the cross bar at an approximate height of 8 feet. After the take-off the participants (during their flight) should try to head the bladder.



- iv. Teaching of Hitch kick. (Adopt the following procedure.
 - a. Take-off and land on the leading leg keeping the take-off leg (trailing leg) to the rear.
 - b. Take-off—Let the leading leg go once forward and back Land on the take-off leg keeping the leading leg to the rear.
 - c. Take-off—Let the leading leg go once forward and back—Again bring the leading leg forward along with the take-off foot and land on both feet.
- v. Proper landing with the co-ordinated arm and leg action.
- vi. Fixing check marks for correct take-off.

5. Hop, Step & Jump or Triple Jump.

- i. Suitable warming up exercises.
- ii. Standing Hop, Step & Jump. (Emphasise the rhythm of movement along with proper step).
- iii. Broad Jump with the wrong foot take-off (This is intended to make an effective jump after "step").
- iv. Hop. step & Jump over the markings made at the fixed ratio of 3: 2: 3 (Draw the take-off line at a distance of 25 feet from the pit. Then draw parallel lines at distances of 12'—8'—12' from the take-offline. Let the participants jump making an effort to strike these marks).
- v. Proper landing.
- vi. Fixing check marks for correct take-off.

6. High Jump

A. Western Roll.

- i. Suitable warming up exercises.
- ii. Finding out the correct take-off foot by asking the students to hop.
- iii. Place the cross bar at about 1J' height. The students have to approach the cross bar one after another at right angles to the bar. Each student should hop (with the take-off foot) slowly twice and during the 3rd hop, he must hop high over the cross bar and land on the take-off foot keeping his body erect and keeping the knee of the leading leg raised in front.
- iv. Repeat the action shown in stage iii but the knee of the take-off foot must touch the chest while hopping over the bar.
- v. Hopping and Turning. While hopping over the bar turn to the left in the case of left foot take-off and turn to the right in the case of right foot take-off.
- vi. Hopping, Turning and Reaching for hand-kerchief. Repeat the action shown in stage V but while landing on the take-off foot he must (with his hands) try to reach for the hand-kerchief already placed on that side of the pit towards which the performer is expected to turn.
- vii. Performance from an angular approach. The students having left take-off move to the left side and those having right take-off move to the right side. They take 3 steps from the cross bar at an angle of

45°. Then starting with their take-off fool they take 3 steps and clear the bar performing the action explained in stage vi. Here the emphasis is made regarding the layout on the cross bar (i. e. side of the body parallel to the bar) and proper landing (on the take-off foot and the two hands).

viii. Fixing check marks for correct take-off.

B. Belly Roll or Straddle Style.

(It is recommended that Straddle style should be taught after the students have learnt Western Roll).

i. Suitable warming up exercises.

- ii. High kicking and landing without cross bar. Here the students are made to kick high with their leading leg (kick-off or non-jumping leg) and land on the same leg with a turn while the trailing leg (take-off-leg) is lifted high.
- iii. Performance over an inclined cross bar. The side from which the approach to the cross bar is to be made is the same as for Western Roll. For those who approach from the left side, the cross bar shall be placed in an inclined plane from the left upright. The height at which one end of the cross bar rests on the left upright may be about 4' to 4£' while the other end of the cross bar rests on the ground. For those who approach from the right side, the cross bar shall be placed from the right upright in an inclined manner. The students have to perform the action (shown in stage ii) over the inclined cross bar. The emphasis is made regarding the layout on the cross bar (i. e.) prone lying position.
- iv. Performance from the angular approach. The students take 3 steps from the cross bar at an angle of 30° to 40°. Then starting with their take-off foot they take 3 steps and clear the bar (kept at a height of 3' to 4'). Here emphasis is made on proper layout and proper landing i. e. landing on the leading leg and rolling sideways.
- v. Fixing check marks for correct take-off.

7. Pole vault.

- i. Suitable warming up exercises.
- ii. Finding out whether the vaulter is a right hander or a left hander.
- iii. Proper grip. The right handed vaulters should grip the the pole with the right hand above and with the left hand below and vice versa in the case of left handed vaulters.
- iv. Pole carry. (Medium carry preferred).
- v. Straight run with the Pole carry (about 70 yards). Here the students are given practice to run with the pole. The shoulder line should be at right angles to the direction of running. The pole should not be moved forward and backward.
- vi. Running, Planting and Long Jumping with the pole. Here the students have to run with the pole and on signal they must plant the pole on the ground, take off with one foot and make a long jump carrying the body close to the pole. The right-handed students should take off with their left foot and carry the body along with pole on the right side and vice versa in the case of left-handed students. Thus they repeat several times.

- vii. Running, Planting, and Jumping to the top of a mound with the pole. Here the students have to run with the pole, plant it on the ground near the mound (about 4' to 5' in height) and land on the top of the mound with a jump, carrying the body close to the pole.
- viii. Pull and Push on an inclined pole. The right-handed students with proper hand-hold should plant the pole in the vaulting box or against a wall and sit down with their legs crossed (right over the left) and their backs facing the box or the wall. In this position the pole shall be kept under the left arm pit. (This must be done vice versa by left-handed students). Keeping the body close to the pole they should pull the body up and turn facing the box or the wall. The contact of the feet with the ground should be maintained throughout.
- ix. Pull and Push on a climbing rope. Here the students stand close to the rope holding it with both hands above the head. Then they must lift their legs off the ground and pull the body up after which they must push off and land facing the rope.
- x. Practise the action shown in stage ix on a pole vertically kept and firmly held by the teacher.
- xi. Vaulting with assistance (without cross bar). Here the teacher should keep the pole in the vaulting box and hold it in an inclined manner at an angle of about 453 and he should station himself on the left side of the pole in the case of a right handed vaulter. The vaulter should run a few strides, approach the pole, grasp it above his head at a fixed place, take off with his left, swing the right leg bent at knee and pull the body up. Now the teacher should assist in bringing the pole to a vertical position. As this is done the vaulter should push off and turn and let go the pole and land facing the runway.
- xii. Vaulting with assistance (with cross bar). The cross bar may be kept at a convenient height and the action explained in stage xi should be practised.
- xiii. Free practice under the direct supervision of the teacher.
- xiv. Fixing check marks for correct take-off

8. Shot Put.

- i. Suitable warming up exercises.
- ii. Proper Hand-Hold.
- iii. Standing Put for height.Here it is better to give practice with light weight shots (6 lbs. to12 lbs.) to instil confidence among the participants as they will easily learn the fundamental positions and actions.
- iv. Wrist Snap and Finger Flip. The students should stand holding the shot in their putting hand. The wrist of the hand holding the shot should be held by the other hand. Then they must send the shot far and high with the wrist snap and finger flip.
- v. Proper Initial Stance.
- vi. Putting with maximum body force from the initial stance,
- vii. Glide or Shift. The practice in "Glide" or "Shift" may be given first without shot and then with shot.
- viii. Then practise the total action of shot put from inside the circle.

9. Discus Throw.

- i. Suitable warming up exercises.
- ii. Proper method of grasping the discus.
- iii. Rolling the discus on the ground. Here the students should hold the discus properly and roll it on the ground in such a manner that the discus leaves the Index Finger last and rolls forward.
- iv. Spinning the discus in the air. The students should spin the discus high in the air in such a fashion that the discus leaves the index finger last having a forward spin.
- v. Practising the preliminary swings with proper stance. At the outset, preliminary swings should be practised without discus and then with the discus.
- vi. Standing Throw. The students should swing the discus twice and in the 3rd swing they must release the discus by the index finger. Here the emphasis should be made on the clockwise rotation of the discus in the air.
- vii. Practising the turns. The turns to be made in discus throw are similar to the movement of "Aage Phalang" in LEZIUM. At the outset the turns have to be practised without discus and then with strap discus. After this, turns have to be practised with the regular discus.
- viii. Then practise the total action of the discus throw from inside the circle.

10. Javelin Throw.

- i. Suitable warming up exercises.
- ii. Proper method of gripping the javelin.
- iii. Correct method of holding, the javelin immediately above the shoulder.
- iv. Practising the forward pulling action.
 - a. Without javelin. Here the thrower should gently turn his body and extend his throwing arm backward which shall be very gently gripped by the hand of the teacher. Then the thrower must turn his body to the front pulling the hand of the teacher in such a way that the throwing hand shall be brought over the shoulder with the elbow leading.
 - b. With Javelin. Here the thrower should hold the javelin with proper grip, turn his body and extend his arm backward. The teacher should gently hold the tail of the javelin. Then the thrower shall repeat the action shown under (a).
- v. Standing throw. Here the thrower should hold the javelin immediately above the shoulder, turn his body, extend the arm backward (elbow not locked) and should execute the throw with proper pulling action explained in stage iv.
- vii. Running practice with shoulder carry. Here it should be emphasised that there should be an easy movement slightly backward and forward of the javelin and that the Javelin point should not move laterally.

- vii. Jogging and throwing. Here the emphasis should be made for a right handed thrower that in the last three steps, the first step should be taken by the left foot and the second step being taken as a front cross step by the right foot and the last step by the left. The action of the throwing arm during these three steps will be that before taking the first step the throwing arm should be extended back and as the first step is taken the body should turn to the right slightly. During the second step the body should be turned well getting into an effective throwing position. During the last step as the left foot strikes the ground the throwing action begins with the drive of the right foot and the throw is executed.
- viii. Running and throwing. Emphasise the action during the last 3 strides.
- ix. Fixing check marks for the correct throw.

11. Hammer Throw.

- i. Suitable warming up exercises.
- ii. Proper method of gripping the hammer and the proper stance.
- iii. Practising the preliminary swings without hammer.
- iv. Practising the preliminary swings with hammer. Here use very light hammers 6 lbs. to 8 lbs. or small sand bags. The preliminary swings should be mastered well before proceeding to the next stage.
- v. Standing throw. The students, should make a few preliminary swings and release the hammer properly.
- vi. Foot work without hammer.
 - a. At the outset the students should practise the foot work of the turns without any arm action.
 - b. Then they should practise the foot w'ork with the arm action.
- vii. Practising the turns with the hammer. The students should make a few preliminary swings using the light hammer and make as many turns as possible with proper foot work. The students should master the turns with hammer so that effective throws may be made.
- viii. One turn and throw. The students should make a few preliminary swings, make one turn and release the hammer.
- ix. Two turns and throw.
- x. Three turns and throw. After practising well the three turns and throw using the light hammers, the students are advised to resort to the use of hammers of standard weight.

J. SWIMMING

Swimming is one of the best physical activities because it involves movements of all the big muscles of the body. It is a good recreational activity and has carry-over value.

Though swimming is individualistic in nature it can be taught easily to a group. The students may be divided into batches for the purpose of instruction, cl: r,s control and safety.

Before teaching. Swimming the following safety measures should be taken:

- i. Swimming should be taught in shallow water.
- ii. The water must be clean.

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- iii. Inflated rubber tubes, ropes, poles etc., should be readily available.
- iv. First-aid kit should be kept ready.
- v. Students suffering from skin disease should not be allowed to enter the pool.

The following procedure with adequate demonstration and explanation should be adopted in teaching swimming:

I. Experience in water or developing water balance.

- i. The students should be made to stand at chest deep water: They must bend their knees and bring the chin to the level of the water. Then they must keep their face on the water and try to raise their feet off the bottom of the pool. After the students have experienced the reaction of the body in the water during this practice, they may be asked to hold the breath, keep the face on water, bend the knees and hold them witli hands trying to float on water. When once the floating becomes possible the students are said to have gained w'ater balance.
- ii. **Getting on the top of water or lay-out:** The students should stand at chest deep water. They must take a deep breath and try to float on water with their hands and legs well stretched. When once this is obtained they have learned the lay-out.
- iii. **Gliding and getting on the top of water:** The students should stand at chest deep water. They must take a deep breath, stretch the arms forward, push off with both legs from the bottom of the pool, and glide forward floating on the water. The same action (i. e. glide) may also be performed by pushing off from the wall of the pool.
- iv. Breathing practice: The students shall be made to stand in shallow water. On signal they have to inhale through the mouth. Then they must dip their face in water and exhale through the mouth. They should then lift the face and inhale. Thus they should repeat several times. They should not be allowed to wipe the water off the face whenever the face is lifted from the water.

v. Teaching of the Crawl Stroke:

a. Leg movements i. e , Flutter kick.

The flutter kick is done by waving the legs up and down alternately, straight from the hip. First of all the students may be made to practise the flutter kick on a table.

The body should be in a prone position on the table and the legs up to the hip should be extending outside the table. Then they must practise the flutter kick.

After this practice, the students should get into water and practise the flutter kick by holding the scum gutter of the swimming pool.

Then the students must stand with their backs to the wall of the pool, take a deep breath, push off with both legs and make a forward glide executing the flutter kick.

b. Arm movements.

The students should be made to practise the arm movements first on land. The students should stand feet apart and lean forward bending the body from the waist. The arms should be hanging



down in a relaxed condition. The shoulder of the right arm should be lifted and then the elbow. Afterwards the arm should be thrust straight forward from the shoulder. Then the arm is pressed and brought straight down under the middle of the body. As the right arm is being brought downward the left arm is lifted and thrown forward. Thus the action is repeated alternately and practised several times.

Then the students should enter waist deep water and practise the arm movements in a standing position as done on land.

c. Combining leg and arm movements.

At the outset the students may be made to lie (across) on a bench in such a fashion that the belly will be resting on the bench and the legs and the arms extending outside. From this position the leg and arm movements should be combined and practised.

After this land drill, the studends may get into shallow water and practise the total action (i. e.) arm and leg movements with the regulated breathing.

vi. Actual swimming under the supervision of the teacher has to be done.

UNIT-V

MOVEMENT EDUCATION:

Meaning:

The concept of movement education in physical education stresses body awareness or an understanding of how the body moves to develop efficient and effective motor development.

Children are taught, using the problem solving method and other techniques, how to control the ways in which their bodies are able to move.

Human movement pertains to many aspects of physical education including various locomotors movement skills such as running, jumping and leaping and non locomotors movement skills such as bending, twisting, turning, pushing and swinging. These skills form the basis for more complex and involved specialized skills that are utilized in sports, physical education, work and life situations.

Key concepts of Movement Education:

Movement education has been widely accepted by physical education because certain basic concepts emphasize its importance in educational programs.

1. Movement education is individual exploration:

Children enjoy running, jumping, climbing, leaping and other physical movements and they like to perform these movements of their own choice. Movement education guide the child through an individual exploration of the many variation of these movements.

Movement education classes provide unlimited opportunities for children to explore the uses of their bodies for movement in ways that are c; native and self ex iressive. By individual exploration 'he child is encouraged to discover what the body can and cannot do while walking, running or jumping.

2. Movement education is student centered.

In movement education, the individual needs of each student have priority, and the inner self rather than from the teacher. Students are given the opportunities to experience the joy of their own natural movements and unique style. The teacher should be creative and imaginative thereby guiding students to success by helping them to evaluate and refine their movements and providing encouragement.

3. Movement education involves problem solving:

Children learn to perceive the position of each segment of their bodies intellectually before attempting any physical skill performance. A child who is becoming educated in movements, begins with problems such as walking, running, twisting and falling. As the child solves the intial problem of walking / running without colliding, he or she may be asked to change direction at will or at signal from the teacher. As simple problems are sloved the problem may be made more complex for obtaining solutions.

4. Movement education is less formal.

Class organization in movement education does not follow the formal patterns of traditional physical education. Lines, circles and set formations are avoided. Frequently the individual work with a partner or in small groups. The teacher will instruct a student individually rather than to class as a whole.

5. Movement education facilitates the learning of motor skills.

The natural movements of childhood form the basis for future motor skill development. The ability of the child to perceive the body as a whole hdps to promote physical skills development. For example a problem solving experience in using the feet to stop a rolling ball will help the child in learning the fundamental skill of trapping in football.

6. Movement education seeks to produce a feeling of satisfaction.

In movement education the students participate in meaningful activities. The child is encouraged to try new activities and to discover new insights compared to other persons. In an independent learning environment, students derive meaning from the activities in which they are participating and a feeling of satisfaction will result.

7. Movement education encourages an analysis of movement.

Movement education provides an opportunity for students to observe and analyze themselves and others in the process of movement. At the conclusion of a class, student demonstration may be held so that the skill may be evaluated and discussed by the entire class. For example in the demonstration one child jumps higher with the use of arms than the child not using arms for jump. Through an analysis of their own movements and those of other children, they will better understand what needs to be done to achieve the best performance.

8. **Movement education involves equipment**

Many pieces of apparatus and equipments can be used in movement education classes. When apparatus or equipment is used, safety, space and appropriateness of use need to be stressed. Equipments and apparatus must conform to the age and size of the child. Balls should be easy to grasp and paddles should fit the hands of the child.

9. Movement education program must be constantly evaluated.

The need for program modifications and adaptations are frequent in movement education. The need for revision will be noted only if programs are objectively evaluated periodically to see whether the objectives that have been set are being achieved.

Movement analysis

Movement education provides an opportunity for students to observe and analyze themselves and others in the process of movement. At the end of a class, the movement in which students have been involved can be evaluated and discussed by the entire students. Greater understanding of movement is an outcome of this process.

For example

Demonstration at the end of a lesson may show that one child jumps higher than another because he or she has learned that the use of the arms will help the jump. Through an analysis of their own movements and those of other children, they will better understand what needs to be done to achieve the best performance.

Body Awareness

The child should be able to indentify body parts, be aware of what his or her body can do, and understand the relationship of body parts to the total self.

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Many body actions are developed by the time the child enters the school. A teacher should provide opportunities for students to continually explore body awareness.

The objectives of studying body awareness are

- 1. To be able to identify the parts of the bod}' and the whole
- 2. To establish the relationship of parts to the whole.
- 3. To determine if students know what the body and body parts can do
- 4. To provide opportunities for students to explore numerous body movements

Basic skills can be divided into three categories, locomotor, non locomotor and manipulative. It is possible for a child to isolate and perform a selected movement or group of movement.

Locomotor:	Walk, Run, Leap, Hop, Roll, Jump
Non Locomotors:	Bend, Stretch, Push, Twist, Swing
Manipulative:	Bounce, Throw, Catch, Spin, Strike, Kick

The children should learn about and explore the possibilities of the various parts of the body in movement. In addition to the ability of body parts to engage in basic movements, the body is also capable of absorbing them.

Example: Landing from a jump

Catching an object

The body parts also can be used to express certain feelings (Sadness, Happiness, Joy) and to imitate (Birds flying, Dog wagging tail).

FUNDAMENTAL MOVEMENT SKILLS

Students need to master certain fundamental movement skills if they are to enjoy the wide range of physical activities, sports and recreational pursuits offered in our communities. The Get Skilled: Get Active resource focuses on twelve fundamental movement skills considered to be building blocks for movement. The fundamental movement skills are:

 static balance 	• catch	• leap
• sprint run	• kick	• over-arm throw
 vertical jump 	• hop	 two-hand strike
• sidegallop	• skip	• dodge.

Teaching fundamental movement skills

The teaching of fundamental movement skills is an essential component of students' learning in PDHPE. It is important to remember the following.

•Students do not pick up fundamental movement skills naturally as part of their normal growth and development.

It takes between 240 and 600 minutes of instruction time to become proficient in one fundamental movement skill.

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•A small number of skills should be focused on in any one year.

•The focus of your teaching should be on one or two skills at a time.

•The best time for developing fundamental movement skills is the early years of schooling.

The teaching and assessment of fundamental movement skills is an essential component of students' learning. Below is information and strategies for teaching fundamental movement skills to students in all stages.

Strategies to be followed while teaching fundamental movement skills.

- * Introduce the main aspects of the entire skill.
- * Provide a demonstration of the skill to help the students form a mental picture.
- * Provide opportunities for exploration of the skill itself and then further practice and application.
- * Use questioning to explore the students' understanding of the skill.
- * Structure prac tice session: that progresstveh focu* on greater refinement of skills
- * Compare the new skill with similar skills with which the students may be familiar.
- * Provide immediate, precise and positive feedback regarding the performance of the skill.
- * Allow for individual differences in the rate of learning skills.
- * Demonstrate and provide feedback to the students about their performance of a skill.

Gaining students' attention

- * Stand where you can be seen by all students. This position will change depending on the group formation.
- * Position yourself so that you can maintain eye contact with all students. It may be necessary to seat the group in order to see the students at the back.
- * Use a recognisable signal to initiate students' attention.
- * Be consistent with the signal or cue you use for gaining attention.
- * Be consistent in your expectations of what the students do when they hear or see your cue.

Maintaining students' attention.

- * Minimise the distractions in the environment.
- * Involve students in the delivery of instructions by asking them for clarification of what has been said.
- * Ensure that all students can hear what you are saying.
- * Be succinct with your instructions.

What do I need to "say" when teaching fundamental movement skills?

Teaching cues;

Consider the following guidelines when using teaching cues.

* Encourage students to practise the whole skill but focus on one component of the skill with a relevant teaching cue.

- * Give only one cue at a time.
- * Use no more than three different cues in a lesson.
- * Minimise the delay between the demonstration of the skill by students and the application of the cue to the bill.
- * Use the same cues when providing feedback to students about their performance. For example. "Well done, you kept your eye on the ball. Now try to bend your elbows.

Checking students' understanding:

- * Checking for understanding involves students recalling information or being able to demonstrate their understanding in a practical situation
- * Checks for understanding should occur throughout the lesson. For example, before beginning a skills practice, ask a specific question about the procedures to be followed during the practice or ask a group for a brief demonstration of the activity. At the conclusion of the lesson, summarise the learning by asking some questions about the key elements of the lesson, including teaching cues for the skill learnt.
- * Checking for retention can be achieved through questioning or demonstrating skills, or recalling teaching cues from previous lessons.

Need of Demonstration:

- * Demonstrations are an essential component when teaching fundamental movement skills.
- * Watch the clips provided from the resource as a visual demonstration of the skill before students practise the skill themselves.
- * Use students to demonstrate a fundamental movement skill or components of the skill.
- * The demonstration should be directed towards increasing the students' understanding of the skill and its components.
- * The demonstration should be followed by an opportunity to practise. Remember, the more complex the skill, the more demonstrations will be needed to allow students to form a mental picture of what the skill looks like,
- * Student demonstrations are more effective as a teaching tool, because they allow students to see someone of their own age and ability performing the skill.

Neccessary for Feedback:

- * Feedback is the information students receive during or after performance of a skill.
- * Feedback is essential for learning because it gives students immediate information about the correctness of their actions.
- * Feedback can come from the teacher or from other students.
- * Use feedback during and immediately following the performance of a skill.
- * Focus on correcting one error at a time
- * Be precise about the cause of the error and tell the studeni how to correctl it,
- * Check to see that the learner understands the feedback.
- * Use genuine, positive feedback that encourages the student.

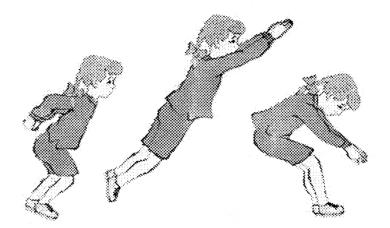
* Correct errors by beginning with a positive statement, followed by an instructional hint and finishing with a compliment. For example, "I liked your back swing; now try to step towards the tee. You're showing a lot of improvement."

Teaching Fundamental Movement Skills to Children

Children do not automatically know how to throw, kick, run and jump as part of their growth and development. These are known as fundamental movement skills. In the same way kids need to learn the alphabet in order to read, they need to learn basic movement skills in order to lead a physically active, healthy life.

The following are a set of lanyard cards which explain what the 12 Fundamental Movement Skills are, and how to recognise if a child is performing the skills correctly.

Jumping: The action of pushing off with both feet and landing with both feet.



- Prepare to jump by bending the knees and pushing the arms forcefully behind.
- Stretch both arms forcefully forward and upward reaching all the way above the head to create momentum.* Take off and land on both feet simultaneously.
- Thrust the arms downward during landing.

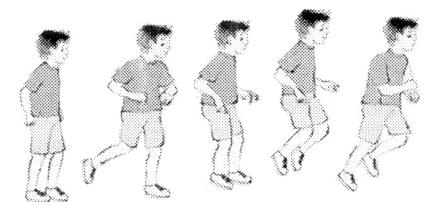
Running: Running Is a rapid movement that involves transferring weight from one foot to the other with a brief loss of contact with the ground by both feet.



- There should be a brief period where both feet are off the ground.
- Ensure there is a narrow foot placement landing on the heel or toe rather than flat-footed.
- The non-support leg should be bent to approximately 90 degrees. I Move

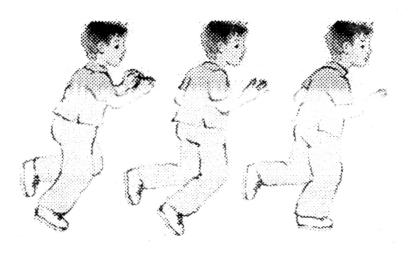
Galloping:

Galloping is a stepping off one foot then sliding with the other foot in a forward direction. Weight is transferred from the front foot to the back foot with a small lift, before the front foot takes the next step. The stepping foot is always the front foot.



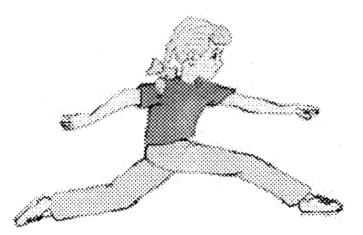
- Arms bent and lifted to waist level at takeoff.
- Step forward with the lead foot followed by a step with the trailing foot to a position next to or behind the lead foot.
- There needs to be a brief period where both feet are off the floor.
- Ensure the child maintains a rhythmic pattern ror at least four consecutive gallops.

Hopping: HoppirgInvolves standing on one foot and lifting off the ground by leaning slightly o: the hopping foot side and moving the bent arms out and in for balance.



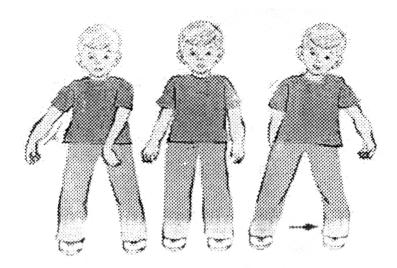
- Starting with balancing on one leg and bending the non-support leg.
- Swing the non-support leg forward like a pendulum to produce swing.
- Keep the non-support foot behind the body.
- Keep the arms bent and swing them to produce the forward momentum.
- Try to take off and land four consecutive times on the non-preferred foot.

Leaping: Leapingls a graceful long step so the body lifts off the ground to cover a distance or go over a low obstacle. A short run before a leap aidsthe momentum of the leap.



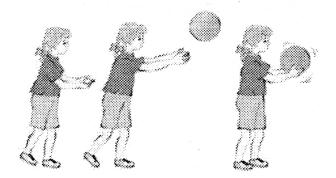
- Take off on one foot and land on the opposite one.
- There should be a brief pe riod where both feet are off the ground.
- The arm opposite the lead foot should reach forward during the leap.

Side-sliding: Side-slidingls like a gallop but to the side and with minimal bounce.



- Turn your body sideways so the shoulders are aligned with theline on the floor.
- Step sideways with the lead foot and then slide the trailing footto a point next to the lead foot.
- Try and do four or more continuous step-slide cycles to the rightthen to the left.

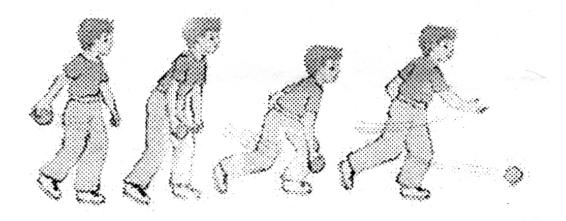
Catching: Catching Is a receptive manipulative skill that involves the receipt of an object. It is one of the more difficult fundamental skills.



- Prepare to catch by holding both hands in front of the body and elbows softly bent.
- Stretch the arms in front to reach for the ball as it arrives
- Catch the ball in the hands only, not the forearms.

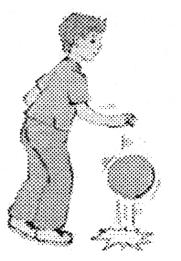
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Underarm-rolling: Underarm-rollingls a manipulative skill that involves applying a pushing force to an object to propel it along the ground.



- Swing the rolling hand back and down reaching behind the trunkwhile the chest and head faces forward.
- Step forward with opposite foot to the rolling hand.
- Bend the knees to lower the body
- Release the ball close to the floor so it does not bounce morethan 30cm.

Stationary dribbling: Stationary dribbling is a manipulative skill that involves applying a pushing force to an object and immediately receiving it again.



- Hold the ball with one hand at about belt level.
- Push the ball down to the ground with the fingertips (do not slap the ball).
- Make sure the ball hits the floor in front of or outside the preferred foot.
- Push the ball down again when it bounces to about belt level.
- Try to do four or more bounces without having to move the feet toretrieve the bail.

Striking a stationary ball: Striking a stationary ball Is a manipulative skill that involves applying a pushing force with a bat to propel an object into the air. This is the most difficult Fundamental Movement Skill to achieve.



- The dominant hand grips the bat above the non-dominant hand.
- The non preferred side of the body face the imaginary bowlder with the feet parallel.
- The hips and shoulders rotate during the swing of the bat.
- Transfer the body weight to the front foot.
- Swing the bat and hit the ball.

THE STRUCTURE AND METHODS OF MOVEMENT EDUCATION

STRUCTURE OF MOVEMENT EDUCATION

There is a fundamental distinction that must be made between the organizational structure of contemporary Physical Education and Movement Education. In Physical Education, the activity itself (volleyball, Track and field or folk dance) provides the structural basis for developing a curriculum. Skills within each area are arranged from the simple to the complex and presented to children in accordance with their physical maturity and general readiness.

Certain concepts relating to movement must be understood by both physical educators and their students if a meaningful understanding of the basic movement is to be attained. These concepts are aspects of Rudolph Laban's four components of movement: (1) body awareness (what can the body do?), (2) spatial awareness (where does the body move?), (3) qualities of movement (how does the body move?), and (4) relationships (with whom or what does the body move?).

A. BODY AWARENESS

The "what" aspect of movement refers to body awareness, The child should be able to identify body parts, be aware of what his or her body can do, and understand the relationship of the body parts to the total self. Many body actions are developed by the time the child enters school, but the teacher should provide opportunities for students to continually explore body awareness.

In posing some of the problems that are suggested in this section, the teacher might find that some students will not be able to respond favorably. These students might have what are variously described a learning disabilities, perceptual-motor problems, and poor coordination. Children with perceptual-motor problem6s have difficulties in receiving information from stimuli of the various senses, processing the information, and responding with the appropriate movement pattern.

This section on body awareness deals mainly with identification of body parts and the ability of the children to engage in basic movement. Inherent in this type of study is an understanding of laterality and directionality (the awareness of directions in space; that is right, left, back, front, up, and down).

The objectives for studying body awareness are:

- 1. To be able to identify the parts of the body and the whole.
- 2. To establish the relationship of parts to the whole.
- 3. To have students locate body parts.
- 4. To determine if students know what the body can do.
- 5. To determine if students know what body parts can do
- 6. To provide opportunities for students to explore numerous body movements.

Educational Technology and Methods of Teaching in Physical Education

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i. Movement of the body and its parts

Basic skills can be divided into three categories: Locomotors, Non-locomotor (Axial movement), and manipulative movements. Each can be considered separately for clarification. It is possible for a child to isolate and perform a selected movement or group of movements in a particular category. On the other hand, a movement pattern might include a number of skills from different categories. For example, a child make shake his or her body (a nonlocomotor activity) while running across the floor (a locomotors skill).

Objectives for studying movement of the body and its parts are:

- 1. To develop locomotors movements:
 - a. even rhythm: walk, run, hop, roll, and jump.
 - b. uneven rhythm : skip, slide, and gallop.
- 2. To develop nonlocomotor(axial)movement:
 - a. Bend and stretch
 - b. Swist and turn
 - c. Push and pull
 - d. Swing and sway
- 3. To develop manipulating movements:

Bounce, Throw, Catch, Strike, Kick, Spin, Roll, Tap, Turn, Elevate

ii. Body Shape

Body shape refers to the position of the body to space. Changing shapes is movement. For example the body can be extended (long or wide or straight) or flexed (tucked or curled small and round). In additional to shaping the body to move in certain restricted spaces, various activities require the body to assume certain shapes. In performing somersaults from a dividing board, for example, a tuck position will be enabling the performer to turn faster. A tuck position is assumed by bringing the knees closed to the chest and the heel in closed to the buttocks. In performing the front somersault, however the diver would have to extend the legs to straighten out the body before it reaches the vertical position. The feet would begin the entry into the water in performing a forward somersaults.

The objectives of a program to study body shape are:

- 1. To learn what shape the body is capable of assuming.
- 2. To be able to control changes from one shape to others with a smooth, flowing action.

Other aspects body awareness

Young children's are eager to learn about and explore the myriad possibilities of the various parts of the body in movement. In additional to the ability of body parts to engage in basic movement, the body is also capable of

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observing the impact of its weight on different body parts or receiving the weight of an outside object. The weight of the body may be supported by many body parts. This is important in many gymnastic and dance movement.

The body parts also can be used to express certain feelings (e.g., sadness, happiness, and joy) and to imitate animate and inanimate objects (for example, like a dog wagging its tail, like a bird flapping its wings, or the statue of liberty). Many other body actions are responsible and the teacher must be imaginative in posing problems for the student and bringing out some of their creative energies.

Some of the specific objectives of programs to further explore capabilities of body parts are:

- 1. To be able to use parts to support the body (bear weight), such as performing a headstand
- 2. To be able to use body parts to transfer weight, such as executing a skipping movement
- 3. To able to use body parts to lead an action, such as bending the knees and thrusting the arms upward in a jump
- 4. To be able to demonstrate that body parts can meet part, as in performing bending and stretching exercises
- 5. To be able to express ideas with body parts such as exhibiting a feeling of happiness by using the arms.
- 6. To be able to perform activities using both symmetrical and asymmetrical movements, such as performing forward roll (symmetrical) in gymnastics and a buzz step(asymmetrical) in dance.

B. SPATIAL AWARNESS

Spatial awareness includes the type of space in which the body moves as well as the direction, level, and pathway that the body takes in movement.

1. Space

All movements take place in space. Space is of two kinds-personal and general. Personal space is the largest space available to a person in a stationary position. This includes the space that people can reach by stretching, bending, and twisting. General space includes the area in which one person or several persons can move. It might be in the gymnasium, the swimming pool, or the hallway.

The amount of space available and the number of persons in a particular space affect movement possibilities. Understanding the concept of personal space and general space is crucial to the student feature growth in movement. Rarely is this understanding reached in the single lesson; therefore these concepts should be reinforced often.

The objectivities of a program to teach spatial awareness include:

- 1. To establish verbal cues to begin and to stop movement in particular area.
- 2. To establish awareness of personal space and general space.
- 3. To establish safety awareness while moving in personal and general space by encouraging no touching and no collisions.

2. Direction

With an understanding of personal and general space, the student can now apply directional changes while moving in space. Direction refers to the movements forward, backward, sideways, upward, downward, diagonally, or any combination of these. The ability to move in a Variety of directions is vital to success in such areas as sports, dance, and gymnastics.

The objectivity in teaching the concepts of direction is to have the students understand directional terminology.

3. Levels

The body moves on various horizontal planes such as high, medium, and low. Levels exits in personal and general space and in all locomotor and axial (nonlocomotor) movements.

The objectives of teaching the concept of level include:

- 1. To differentiate among high, medium, and low levels
- 2. To be able to change levels
- 3. To combine level changes while using directions and space.

4. Pathway

A pathway is a line of movement from one place to another in a given space, it might be the movement of the entire body in a general space (e.g., to run from home to first base in a softball game) or the movement of a part of the body in a personal space (e.g., a level [horizontal] swing of the bat with the arms).

The objectives for teaching the concepts of pathways are:

- 1. To create student awareness of alternative pathways in which they can move; that is direct and indirect pathways
- 2. To develop the ability of the body to move through many pathways
- 3. To have the student identify and move on specific pathways

C. QUALITIES OF MOVEMENT

How the body moves is affected by certain qualities of movement including time, force, and flow. Additional factors such as body shape and the relationship of the body to other people or objects also affect body movement.

1. Time

Time is related to the speed at which movement takes place. This may vary from very quick movements to extremely slow movements. In many sport activities a change in speed is necessary. For example, a runner in touch football might be required to slow down to let the blockers ward off the opponents and then speed up to outrun them to the goal line. Sudden explosive movements are also necessary in some sport activities such as basketball, in which considerable power is necessary to rebound the ball.

The objectives of a program to study the concept of time are:

- 1. To differentiate among speeds slow, moderate, or fast
- 2. To be able to increase or decrease the speed of movement- accelerate or decelerate
- 2. To be able to perform evenly or unevenly in time-sudden, jerky, smooth, or even movement; variation in rhythm

2. Force

Force is the effect that one body has another. Force generated by the body is produced by the contraction of muscles. In addition to producing force, the body is also capable of applying and absorbing force. Different movements or actions required the production of varying degrees of force and proper application of that force to sustain those movements. For example, because of the difference in the weight of the object, it takes more force to throw a softball than it does to throw a wiffleball. However, less force would be required to hit a ball with a long bat than it would to hit the same ball with a shorter bat; the longer lever would create a mechanical advantage.

The extremes of force might be described as strong and weak, heavy and light, hard and soft, and harsh and gentle. The amount used will depend on the movement attempted. In kicking a soccer ball, for instance, it would take a stronger force to kick the ball 25 yards than it would to kick the ball 10 yards. On the other hand, it takes a light force to properly dribble a soccer ball.

Many opportunities exist for the use of force in movement. It might be used to move the body or its parts in space, to resist the natural pull of gravity, or to maintain a good posture. An important factor in the consideration of force is that it can be controlled.

The objectives of a program to study the concept of force are:

- 1. To differentiate between light or weak and heavy or strong forces and in between these extremes
- 2. To be able to control the tension of muscles to the extent that is needed to fulfill the purpose of a task
- 3. To be able to effectively utilize different degrees of force.

3. Flow

Flow is the continuity or coordination of movements. A smooth, flowing movement requires the control of external and internal forces so that there will be proper transition among the various movements. Movements may be free flowing or they may be movements of bound flow. Free flow movement describes a movement that is continued to a controlled conclusion. On the other hand, bound flow refers to movements that can be momentarily stopped while the balance is maintained at several points in the movement. A good example of bound flow movements is a routine on the mat in free floor exercises. At several points in the routine the performer is required to hold movements in a balanced position yet create a continuous, well- coordinated routine.

The objectives of a program to study the concept of flow are;

- 1. To differentiate between free flow and bound flow
- 2. To be able to perform efficient, graceful movements
- 3. To perform movements with sudden breaks and holds.

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