CHAPTER I
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Chapter - I

INTRODUCTION

In this chapter General Introduction of the study, Statement of the Problem, Definition and Explanation of the Terms, Delimitation, Limitation, Hypothesis and Purpose of the Study have been presented.

1.1 GENERAL INTRODUCTION

Man is a social animal and his primarily distinction from other animal is in learning ability. He has intelligence, which helps to modify his animality to rationality in accordance with the demands of the environment and society. It is however the education, which enhances his intelligence and capabilities so as to ensure proper progress in life. Education is a process, which enables a man to acquire knowledge through conductive manner which is essential for an individual to be human being. According to professor Drever, “Education is a process in which and by which knowledge, character and behavior of young are shaped and moulded.” It is a constructive process leading to enlighten and develop of all the aspects of an individual's personality – physical, mental, emotional, social, intellectual and spiritual. Education leads to his integrated, balanced and all-round development making him civilized, matured and responsible member of the society possessing dynamic personality.

In the primitive age - food, clothing and shelter were the primary needs of man. The needs however increased in quality and
quantity with the progress of civilization, and with others the education, health, recreation etc. were added in this list. Man has made a great progress to fulfill these needs (biological, sociological and psychological) and education has played a great role in the ever continuing process of evolution of man from being primitive to the cultured and civilized human being of present time. Education develops the overall personality of an individual and is thus essential for the growth and development of an individual as well as his society.

Early days, parents used to send their wards to GURUKUL for acquiring knowledge and education. At that time education was teacher centered. The teacher (GURU) used to teach to the taughts through counseling and advice and the learners used to listen it.

Old Indian concept of education was on the basis of three means- Bhakti (devotion), Karma (action), and Gyan (knowledge), but now this concept has totally been changed. According to Edward Thring, "Education is the transmission of life by the living to the living."

The meaning of education assumes that all knowledge is inherent in human beings and to draw-out this inherent knowledge modes, ways, methods have to be found. Mahatma Gandhi opined in support of the above view, "By education I mean an all-round drawing out of the best in the child, body, mind and spirit." Pestalozzy writes, "Education means a natural, progressive and systematic development of man's all innate powers."

Education is a never ending process, it is a growth, a progress and a development which never stops and goes on all through the life and even travels from one generation to another and ultimately
inculcates in an individual's creative thinking, reasoning power and analytical ability which enable him to act and adopt to the changing social scenario in the best possible way for the future enhancement and development of his personality. John Dewey also holds the view, "Education is the process of living through a common reconstruction of experiences." Barrow and McGee have defined it as, "A change, a modification or an adjustment on the part of an individual as a result of experience."

Modern concept of education is not to teach or impart but to develop. In the opinion of Painter, "The aim of education is complete human development". Unlike part generation, we are passing through the greatest transitional period in the history of mankind. In the last century changes have occurred so rapidly within such a comparatively short period that we hardly had time to change and adjust ourselves in the new conditions. Education assumed the great role in helping out the man in fulfilling the ever-increasing demands and changes he was facing. Education must deal with these changes, which make our life complex. By developing programmes which can provide some safeguards from an over exposure to the complexities, stress and pressures that man is facing in this technological age, education has sought out solutions in these aspects. For building up a new generation committed to the process of modernization is inevitable.

In this modern era, physical education has consolidated its position to challenge the changes. In modern system of education, teacher has to involve the learner to help him to know him by doing and the teacher will show the path as guide. So it is child centered.
In the same way, physical education is not only physical exercise or physical culture or sports culture, it has a status like other educational systems. So, for teaching physical education as a profession is growing day by day. To teach physical activities in a better way many professional personnel are required, these includes sports mediciner, sports physiotherapist, psycho-analyst, physical skill trainer like coach, official etc. So, it has many branches like Exercise Physiology, Sports Medicine, Yoga Therapy etc.

Modern concept of physical education as an integral part of total educational process was originated in the last decade of 19th century by an academic circle consisted of educational philosopher like John Dewey, educational psychologist like Throndike and physical educators like Thomas Wood, CW Hetherington, Rosalind Cassidy. With the solid foundation of scientific facts and principles physical education has been proved to be a strong endeavour to develop the cognitive, affective and psycho-motor faculties of an individual.

Physical education has the unique characteristics of selecting pleasure giving and interested mode of education for the children. Motor learning has been proved to be a process of acquiring movement skills. This is an important aspect of physical education. There has been attempts to analyse and explain the phenomenon of motor learning using laws and theories of learning. It is understood that learning of a movement activity has three main sequential and interlinked phases. Prof. Minel has identified them as:

1. First phase of rough co-ordination;
2. Second phase of fine co-ordination and;
3. Third phase of automatic execution.
The main characteristics of these three phases can be described as follows:

First phase of rough co-ordination:

The first phase of motor learning involves some visual and auditory clues to develop a clear mental picture of the activity the learner has to develop. Teacher gives demonstration and explains regarding what should be done and how? The educand tries to develop a clear mental picture of the motor skill and the method for execution of the skill. The main characteristics of this phase are:

(a) The movement co-ordination is very poor;
(b) The movement consistency is not achieved;
(c) The execution is full of errors;
(d) The performance level remains low; and
(e) The image developed of the motor skill to be performed is not accurate.

This phase continues weeks and months depending on the nature of the skill and quality of practice. According to experts, supervised and correct practice is very important in this phase. In this regard, there have been two basic methods to be followed by the students. These are Massed practice and Distributed practice. In massed practice the learners are allowed to practise the skill continuously for a longer duration without any break in between. In distributed practice the learner practise the skill taught with some break in between. The teacher's role in this connection is correction of faults and providing suggestion for future improvement.
The second phase of fine co-ordination:

The second phase of fine co-ordination is gradually achieved. The movements become more co-ordinated, performance improves, committed errors reduce. The second stage is reached after the removal of the associated problems. The energy consumption becomes lesser. Of course the execution still involves small errors.

The third phase of automatic execution:

Finally, the third phase of automatic execution is reached due to more and more supervised practice and the skill execution becomes automatic. It becomes almost error free and performance becomes higher.

Use of Massed and Distributed practice for a motor skill has been followed in physical education class. There have been some attempts to study the influence of these methods on motor learning. The present study was formulated as one such attempt. Retention of learning is also considered as an important phase of total process of learning. Effect of Massed and Distributed practice method was also considered as the second area of analysis in this study.

1.2 STATEMENT OF THE PROBLEM

The main purpose of the project was to study and analyze the effects of two practice methods commonly used in physical education for learning and retention of learning. The problem was accordingly stated as:

"A STUDY ON THE EFFECTS OF MASSED AND DISTRIBUTED PRACTICE ON THE ACQUISITION AND RETENTION OF MOTOR SKILL."
1.3 DEFINITION OF TERMS

In order to understand the scope and findings of the present study in a better way a few terms should be specifically understood as explained below:

(a) **Massed Practice**

Massed practice is a method of practice in which a learner engages himself for a long period of time for practicing a skill without a break in-between. Generally, this type of practice is conducted two times a week for duration of more than two hours a day for motor skill. The frequency of training session per week is lesser in Massed Practice. This method has been used by teachers and trainers extensively. In the present study, the term has been used specifically to indicate the practice of selected motor skills for two hours continuously for two days in a week.

(b) **Distributed Practice**

The experts have defined distributed practice as the method of practice in which the rest period is longer than the practice period. Distributed practice is a method of practice in which a learner engages himself in training and learning for a short period of time. For motor skill learning, this type of practice is conducted four times a week for not more than one hour in each day. The frequency of training session per week is more. In motor learning distributed practice has been used by the teachers and trainers also for a pretty long time. In the present study, the term has been specifically used to indicate the method of practice of selected motor skills for one hour continuously for four days in a week.
(c) Acquisition of Motor Skill

Acquisition of motor skill has been understood as complete learning of the motor skill. This involves the change of behavior of learner in respect of the execution of the motor skill. Execution is also better understood from the consistency of skill execution and the level of performance achieved. In present study, acquisition of motor skill has been used to refer learning of unknown motor skill and improvement of performance.

(d) Retention of Motor Skill

Retention of motor skill has been understood as maintaining the level of acquisition and performance after a period of break in practice. In the present study, retention effect was judged after three months of break in practice of the selected motor skills.

(e) Motor Skill

Motor means movement and skill means the method of performing some task effectively and efficiently.

Motor skill is basically a movement activity. It is understood that each game or sport has a number of basic skills. For achieving a higher level of performance one should learn the skill and practise so that he can perform them in competitive situation for higher performance. In the present study, the selected motor skills were free throw shooting in basketball and forward defense in cricket. These were selected considering their lack of familiarities for the subjects.

1.4 DELIMITATION

The present investigation was delimited to the following conditions:
(i) The study was conducted taking school boys of 12 to 14 years of age as subjects.

(ii) Only two unknown skills of two different games were considered. They were free throw shooting in basketball and forward defense in cricket.

(iii) The teaching was delimited to the practical part of the skill.

(iv) The study was conducted only with boys as subjects

1.5 LIMITATION

The major limitations of the study were as follows:

(a) Motivation for practice on the part of the subjects was a limiting factor;

(b) The precision of measuring devices was not very high.

(c) The standard of equipment and facilities like playground and instruments used by the subjects for practice of skills was not very high;

(d) Time and finance were also limiting factors.

1.6 HYPOTHESES

On the basis of discussion with experts and personal experience investigator formulated the following hypotheses:

(a) Both Massed and Distributed practice methods would influence acquisition and retention of motor skill;

(b) There would be no difference between massed and distributed practice methods for acquisition of motor skills;
(c) There would be no difference in retention effect produced by Massed and Distributed practice methods.

1.7 PURPOSE OF THE STUDY

The results of the study will serve the following purposes for the field of physical education:

(a) The effect of massed practice on acquisition of motor skills will be understood;

(b) The effect of massed practice on retention of learning of motor skill will be clear;

(c) The effect of distributed practice on acquisition of motor skill will be clearly understood;

(d) The effect of distributed practice on retention of learning of motor skill will be known;

(e) Both the methods of practice will be compared in respect of their effectiveness on acquisition and retention of motor skill;

(f) The results will help to formulate the more effective method for teaching and learning of motor skills;

(g) The results will provide valuable information for future research.