Chapter-I
INTRODUCTION

Research is a systematic search for finding the solutions to questions and problems in an orderly and logical way. It is a scientific method of finding answers to questions and its methodology which includes defining problems, formulating hypothesis, collecting, organizing and evaluating data, making deductions and testing conclusions. The fundamental purpose of research, then, is to attack the cutting edge of knowledge and extend the boundaries of those horizons through scientific investigations and creative scholarship.

Sport is a universal language. It can bring people together, no matter what their origin, background, religious beliefs or economic status. Physical Education aims at strengthening the learning process of children and youth so as to make them responsible citizens in our democratic society. Games, Sports, Dances and Art act as important cultural bridges among the people of the world. International competitions such as Olympic Games, Dance Festivals, Art Exhibitions, act as integrating agents between nations.

As such, fitness levels of people are deteriorating day by day due to over sophistication. Girls are becoming weak and unable to become healthy mothers, while boys are unable to grow strong and healthy. In this situation, regular participation in sports and games and regular exercises can benefit the people. Sports improve life style.

The origin of any game roots back to Entertainment of Individuals or groups. It may involve violence or non-violence.
Even in primitive ages, mankind played one or the other kinds of the games for individual or group entertainment or to celebrate successful raids conquests or victories, accompanied by merry making. Even during the times of ‘Mayan’ civilization (3000 years ago), it can be noticed that the games were played by them, but involved violence. In a game similar to Basketball, the ring being attached to a side wall at certain height. The participating teams had to throw a ball type thing and in case of failure the concerned individual or player had lost his head being cut off. The Greeks invented and introduced many games and sports out of their Love for Entertainment and the same were used for celebrating the great Events. Before, dating back to 776 B.C. Games and sports have always been part and parcel of human activity since the start of human civilization involving violence or non-violence.

In 21st century the sports and games have been transformed and developed into a high degree of science and technology, ramified into different branches like sports medicine, sports engineering sports engineering, sports anthropometry, sports journalism, sports management, sports training, sports psychology, sports photography, sports biomechanics etc.

Sport is a factor or a Media or an agent which humanizes and socializes the individuals. The Physical Educationist and Sport Scientist believe that Physical Education and Sports are helping the Individual to make personal adjustment, group adjustments and adjustment as worthy member of the society. Hence, adjustment is one of the aspects of culture, which develops through physical education and sports. Physical education and sports develop social qualities such as co-
operation, friendship, sympathy, honesty, fair play, sportsmanship, and respect for authority. Sports develop contact with individuals from different languages, countries, and cultures. Directly or indirectly, sports play a predominant role to develop the spirit of assimilation, interaction, accommodation, and cooperation of the social and democratic characteristics among the citizens. Sports and physical education totally transform the human animal into a human being, by converting the biological being into a social being.

The sports depending upon the aims to be achieved can be classified into various areas—school sports, rehabilitation sports, recreation and fitness sports, industrial sports, and performance sports. Each area caters to different sections of society and has different aims. The sports have gained immense importance in recent times and have made sports more popular, contributing much towards the development of organized sports science and for the development of performance in sports.

Physical education aims at strengthening the learning process of all children and youth so as to make them responsible citizens in our democratic society. (Street and Menecly, 1950). Games, sports, dances, and art are various aspects of culture, which act as important cultural bridges among people of all nations in the world. International Competition in Games and Sports such as Olympic Games, Dance festivals, and Exhibitions act as integrating agents among the nations of the world.

“Sound mind in a sound body” is a common saying. Physical activities involve a whole—man but not his body and muscles only. It is based upon the biological unity of mind and
body. Games and sports are important for the development of well-balanced personalities and for social welfare. Sports and recreation have their physical, mental, emotional, social and civic benefits. Physical education aims at keeping people healthy. All aspects of organized education aim at health. The physical education / health programs provide boys and girls with accurate and significant knowledge relating to their individual needs and interest. There is also growing concern for health services and healthy physical and emotional environment.

Maintaining good health and strength is the key to youth. The human body does not need food only to maintain itself but also for proper good health. It needs activity, exercise, relaxation, sleep and above all, a right mental attitude to develop healthy muscles, stress, stain and strong nerves to be able to withstand the ups and downs of modern life. In India, the health level of people is going down day by day. Girls are growing weak and unable to become healthy mothers; boys also do not grow into strong and healthy young men. The body has a language of its own and each one of us can know with little effort, the fundamentals of the working of this marvelous self-regulating and self-repairing automatic machine. Health is defined by Johns, Shutton and Webster ‘as the quality, resulting from total functioning of the individual, which empowers him to achieve a personality to satisfy and live a socially useful life’.

The sports have clear cut classification on the basis of intensity of participation namely the recreational sports for children, therapeutic sports for elders, disabled persons, diseased persons and competitive sports for youth and adults.
Due to over sophistication and lazy lifestyle, youth are growing prematurely old. Every day there is an increase in the number of patients. New names are being registered in the list of diseases. Doctors and scientists are busy in inventing new medicines to fight these ever-increasing unknown diseases. Still, neither sickness is rooted out nor people become healthy and strong. “What is the reason behind this state of affairs”? How to get rid of these maladies known and unknown. In fact a healthy and physically fit person is one who is dynamic and has a positive outlook towards life. His mind is always cheerful and full of hope for a bright future. Vivekananda once said that one can be nearer to heaven through football rather than through Bhagavad Gita.

In modern world regular participation in sports and games and regular exercises is beneficial to everyone to maintain good health. Basketball is one among such sports that is being played all over the globe.

**Basketball**

Basketball was invented in December 1891 by the Canadian clergyman, educator, and physician James Naismith. Naismith introduced the game when he was an instructor at the Young Men's Christian Association Training School (now Springfield College) in Springfield, Massachusetts. At the request of his superior, Dr. Luther H. Gulick, he organized a vigorous recreation suitable for indoor winter play. The game involved elements of American football, soccer, and hockey, and the first ball used was a soccer ball. Teams had nine players, and the goals were wooden peach baskets affixed to the walls. By 1897-1898, teams of five players became standard. The game rapidly
spread nationwide and to Canada and other parts of the world, played by both women and men; it also became a popular informal outdoor game. U.S. servicemen in World War II (1939-1945) popularized the sport in many other countries.

Basketball is definitely an athletically challenging sport, as it exercises all of the muscles in the body. The arms are exercised through the passing and shooting of the basketball while the legs are exercised through the running up and down the court and the jumps they complete in order to gain height for a shot and for receiving the ball during rebounds.

It is important to note that basketball not just exercises all of the parts of the body but it exercises all the muscles as well, as mentioned. The leaping and running movements exercise all of the lower parts of the body and the shooting and passing movements exercise all of the arm muscles as well as the chest, a chest pass is having same movement as that of a push-up. Because of the completely interdisciplinary techniques involved in the sport, training for it is extremely varied as well.

Basketball is a great game that is most popular in America. This sport requires good aim to shoot, good jumping skills to shoot and rebound, you quick actions, and also good ball handling skills.

**History of basketball in Asia**

In 1894 the game founded its way to Asia. Robert bob Gilly Gauddle of Y.M.C.A College introduced this game in Tients in China. Then Mr C. Hareck brought the game to Japan. The Asians who studied at the Spring Field College after completion
of the course when the returned there to native nations. Introduced the game in their respective countries.

**History of Basketball in India**

INDIA the spectator game was introduced in India by American missionaries towards of the 20th century. In India this game was introduced by H. C. Buck at Y.M.C.A in Madras. BFI was formed in February 1950 the BFI is Affiliated to IOA. In India, this game was played for the first time in 1930. The first Indian National Championship for men was conducted in 1934 in New Delhi. The Basketball Federation of India (BFI), which controls the game in India, was formed in 1950.

Till 1970, the national basketball championships and all-India tournaments were conducted on mud court. After 1970 concrete court are used for basketball as the basketball federation of India has made concrete court as mandatory. Synthetic rubber ball is used in place of stitched leather ball. From 2010 the national basketball championships and All-India tournament are conducted on indoor courts and now synthetic courts become mandatory for these championships. The players are forced to improve their skills and speed to match these changed conditions of the surface.

In India, evaluation of the standard of performance of players at a given time is done with the comparison of the performance of players with the players of the yester years and the process of selection is on the basis of mere observation and opinion, and less on the basis of any statistical records. In the countries like the United States of America, statistical records like percentage of field goals shooting, free-throws, average height of the players and weight of the players are maintained for
every year for different levels of national level competitions and this information enables them to put in efforts to overcome the deficiencies in the future. India’s team performance records in various international competitions could serve as tools for evaluating the standards of the players.

**Basketball game - a brief outlook of skills**

The game of basketball is very complicated in terms of skills and team work. In this game, everyone should gain mastery over fundamental skills like Dribbling, passing, shooting, rebounding, defence etc. When one has mastered the fundamental skills of the games, he gets a feeling of well being. High level of performance otherwise known as playing ability in basketball depends upon proficiency over the fundamental skills. Basketball today has undergone an excellent of improvement since its origin. A basketball players is always required to move from one place to other place on the court while playing a well competed match, changing his pace from slow to fast, and many times to collect rebounds in offence and defence, dribbling, shooting defending, faking and changing direction in movement.

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**Skills in Basketball**

**Dribbling**

Using one hand at a time, the ball is bounced on to the floor. The player can remain still or move across the court while
dribbling. The dribble ends when the player catches the ball. They are not allowed to start dribbling the ball again until another player has touched the ball. To improve the ball control dribbling has to be done with the fingers which helps to maintain better overall control.

**Muscle groups in Dribbling**

Just like a free throw, dribbling engages multiple muscle groups across the body. The muscles in the shoulder, elbow and wrist are particularly responsible for the pumping motion that pushes the ball to the ground. The deltoids, triceps, biceps and forearm muscles must lengthen and shorten correctly and efficient to dribble the ball.

**Speed Drill**

The speed dribble is used to advance with the ball quickly against little or no defensive pressure. The dribblers hand should be behind the ball pushing it in front, then running to catch up. This prevents a "palming" or "carrying over" violation. The speed dribble in the open floor can be a little higher than other dribbles. Control dribble moves should be around the knee, but a speed dribble can be waist high.

**Passing**

The movement of the ball from one player to another.

**Muscles Groups in Chest Pass**

The chest pass, which resembles a pushup motion, is a common way to get the ball to another player. The elbow extensors, including the triceps, pectoral and deltoid muscles,
work in concert as an isotonic contraction to make a chest pass to another player.

**Chest Pass**

The chest pass is named so because the pass originates from the chest. It is thrown by gripping the ball on the sides with the thumbs directly behind the ball. When the pass is thrown, the fingers are rotated behind the ball and the thumbs are turned down. The resulting follow through has the back of the hands facing one another with the thumbs straight down. The ball should have a nice backspin. When throwing a chest pass, the players should strive to throw it to the receiver's chest level. Passes that go low to high or high to low are difficult to catch.

**Overhead Pass**

The overhead pass is often used as an outlet pass. Bring the ball directly above your forehead with both hands on the side of the ball and follow through. Aim for the teammate's chin. Some coaches advice not to bring the ball behind your head, because it can get stolen and it takes a split-second longer to throw the pass.

**Rebounding**

Height and good jumping ability have certain advantages in offensive rebounding. They are by no means the only factor in becoming a good rebounder. There are many instances, at all levels, that a seven footer is out battled for a rebound, even out-rebounded for an entire game by a player as much as six inches shorter.
Rebounding is an important basketball skill that is developed and improved through these three ingredients:

1. Aggressiveness
2. Positioning
3. Determination

**Shooting**

How to shoot a basketball correctly is the most important skill that is required to master in order to play the game. Using the right form helps to score more points, so take the time to learn how to shoot before it hits the court.

**Layup follow through**

While going for a lay-up shot, the FOLLOW THROUGH should be the same as a regular shot. Palm is facing the basket, with the ball coming off of the 1st two fingers. Flop over the wrist to get backspin on the ball for a nice soft shot. Later, when a player can jump higher, the palm can face skyward and lay the ball up softly off of the backboard with very little spin.

The standard of Indian basketball need to be improved. All the attempts of the basketball Federation of India and the government of India to raise the standard of Indian basketball in the international competitions can become true only when they select the true talent and conduct continuous coaching for these players. The experience of the past leads us to think of far-reaching measures to end the stagnation of the standard of basketball in our country.
The game of basketball is very complicated in terms of skills and team work. In this game, everyone should gain mastery over fundamental skills like Dribbling, passing, shooting, rebounding, defence etc. When one has mastered the fundamental skills of the games, he gets a feeling of well being. High level of performance otherwise known as playing ability in basketball depends upon proficiency over the fundamental skills.

Motor components in basketball

Speed

Speed is one of the most important physical fitness components, which is highly essential for many physical activities. For any competitive sports activities speed is highly essential to achieve high-level performance. The ability of the player in performing the skills with speed determines the quality of the player in basketball. In the game of like basketball, speed is more essential because the basket ball moves faster than the man and to keep the pace with the ball, the player has to develop the component of speed.

Agility

Agility is another important physical variable. Agility may be explained as the physical ability, which enables an individual to rapidly change body position and direction in a precise manner. Johnson and Nelson say,” Agility may be explained as the physical ability which enables an individual to rapidly change body position and direction. Agility plays a significant role in the training of technique and in competition

Changing position and direction of the body quickly at a higher speed is very much useful in speed game like basketball.
The players having more agility perform better than other in basketball.

**Need for basketball skill tests**

In India, evaluation of the standard of performance of players at a given time is done with the comparison of the performance of players with the players of the yester years and the process of selection is on the basis of mere observation and opinion, and less on the basis of any statistical records. In the countries like the United States of America, statistical records like percentage of field goals shooting, free-throws, average height of the players and weight of the players are maintained for every year for different levels of national level competitions and this information enables them to put in efforts to overcome the deficiencies in the future. India’s team performance records in various international competitions could serve as tools for evaluating the standards of the players.

**Measurement and Evaluation**

Measurement and Evaluation are universal practices. They reflect man's ever-present curiosity about his environment and his concern about himself. The process of evaluation in education is a never-ending cycle. Measurement and evaluation of performance are essential to determine how well the formulated objectives have been met, how efficient the process has been, and how good the product is. The results indicate the direction and the rate of change in performance. In athletics and physical education, as in education and in life, the teacher and coach are constantly evaluating and measuring the performance of their students. The most valid form of evaluation is the use of
well-established norms, as a basis for comparisons. (Mary, 1972).

Evaluation is essential in the process of teaching and coaching. Through evaluation, a teacher/coach can know the extent to which learning has taken place. Hence, the teacher/coach must be aware of some evaluation techniques, which will enable him to measure the student’s/player’s skill objectively and classify them initially as well as by measuring the progress made by them. There are few skill tests in various physical activities, which help to measure the playing abilities of the students/players in different games and sports.

“Norms are the values considered to be the representative of a specified population. A test that has accompanying norms is definitely preferred to one that is usually based on age, weight, grade, height or various combination of these characteristics” (Johnson et al.1988).

Norms are necessary if the test scores are to be adequately interpreted. There are several types and it depends on the purposes of the test and the characteristics of the group to be tested as to which type is selected. The procedure for developing norms starts with the collection of scores on the test from a large sampling of students from the population for which the test was intended. The large collection of scores can be converted into some type of normative scores. On the basis of these norms, performance and achievement can be adequately evaluated, scores can be properly interpreted and groups can be compared.
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**Skill Tests**

A skill test comprises of a variety of test methods, including objective procedures, subjective ratings, and direct performance assessment. Motor ability testing has a long history in human performance and will take on increased importance in athletics and employment testing. The most important consideration is to select valid tests that meet one’s test objectives and are feasible in terms of time and effort. Kirby (1991) is an excellent resource for descriptions and critiques of motor performance tests.

Valid tests are constructed through scientific research and scientific research always must depend on valid tests for securing objective data. A test must first be reliable in order for
it to be valid to truthfully measure, what it purports to measure. Validity can be subdivided into several different types, such as content-related validity, criterion-related validity, and construct-related validity. Sports skill tests are good examples of criterion-related validation procedures. Green East, and Hensley (1987); Hensley (1989); and Hopkins, Schick, and Plack (1984) provide excellent examples of the procedures used to validate sport skill tests. A criterion measure must first be developed and then a variety of skill tests (i.e. a test battery) correlated with the criterion measure to determine which of these are most valid and most helpful in estimating the criterion. If a series of tests is used to estimate the criterion, multiple correlation procedures are used rather than the simple Pearson correlation coefficient.

The initial use of sport skill tests was the Athletic Badge Test in 1913 (Hardayal Singh 1995). The early form of skill testing was more of the general or fundamental skill type, but as the new design in test construction through statistical procedure became common. Brace presented one of the earliest skill tests on basketball. Skill tests for achievement in specific sports were devised in great numbers during the 1930’s. The general procedure was to determine statistically a few simple test items to measure the total activity of that sports test were developed. For most sports, both team and individual tests and in some case norms were established for age and sex groups.

The American Alliance for Health, Physical Education Recreation and dance (AAHPERD) has provided guidelines for skills test development (Hensley 1989); these are the development of AAHPERD skill test series and also apply to the measurement of motor abilities.
The guidelines state that skill test should

- Have at least minimally acceptable reality and validity.
- Be simple to administer and to take.
- Have instructions that are easy to understand.
- Require neither expensive nor extensive equipment.
- Be reasonable in terms of preparation and administration time.
- Encourage correct form and be game like but involve only one performer.
- Be of suitable difficulty (neither so difficult that they cause discouragement nor so simple that they are not challenging).
- Be interacting and meaningful to the performer.
- Execute extraneous variations as much as possible.
- Provide for accurate scoring by using the most precise and meaningful measures.
- Follow specific guidelines if a target is the basis for scoring.
- Require sufficient numbers of trials to obtain a reasonable measure of performance (tests that have accuracy as a principal component requires more trials than tests measuring other characteristics.)
- Yield scores that provide for diagnostic interpretation whenever possible.

Abraham (1956) describes that basketball is a very interesting game as there is much pleasure in exhausting the skills. It has several fundamental skills. The mastery of the fundamental is very essential in improving the standard of the
game. Besides the fundamental skills, the game is a team effort requiring team offence and team defense.

Hence, the test administration at various stages has to be reconsidered regarding the suitability of the test for the Indian testers, and the innovative possibilities for the various levels of subjects. Also, group of new test items in each area have to be constructed so as to suit any chosen subjects. Coaches and physical educators have to select the players at an early age and train them scientifically to reach the peak achievement levels of the players. Both subjective and objective measures have been used to assess sport skill achievement in Physical Education. Safrit (1989) has stressed the importance of making objective rather than subjective judgements. While a subjective rating instrument may be used effectively by a privileged few, most of the physical educators search for objective skills tests to assist in the evaluation of sport skills.

The young players trained and coached through a whole spectrum of fundamentals and made aware of the various patterns of play are the best basic resources for the development of high standards of the game. To ensure supremacy in the game and high standards in the various fundamentals, the coach must adopt some forms of testing during various phases of the training program. Tests for basketball game though complicated are not difficult to devise and the coach can easily make up a battery of tests to cover the fundamentals such as passing, and receiving, dribbling, shooting, rebounding, footwork and defense.

Further, it may be stated that the purpose of skill tests is to help both the teacher and the taught. Teachers can help the students to evaluate their performance in the fundamental skills
of the game and to provide them an incentive for improvement. Tests also serve the purpose of helping the teacher to measure the students’ performance and to evaluate his own teaching procedure and programmes.

However, while devising this battery of tests there is a need to study the need for the tests. There are no tests available for the particular purpose or those available may be found to be unsuitable for various reasons. Hence the coach has to consider the important skills to be measured in order to save time.

Bosco and Gustafson (1983) suggest that four criteria have to be considered in the selection or the construction of a new test item, namely validity, reliability, objectivity and administrative feasibility. Of these, validity is most important. But the discussion of validity is incomplete without any analysis of reliability, since a test cannot be considered valid unless it also possesses suitable reliability. Administrative feasibility of tests is as much important as are the reliability and validity. Due consideration has to be bestowed on the local conditions and resources before a test is designed. Also, objectivity is important when more than one judge or scorer is to be used.

The main characteristics of a test should measure important abilities connected with the game and should be like game situations, they should be interesting and meaningful, and the subjects tested should be only one player at a time. They should also be motivating and understandable to the trainees. When finally the tests are standardized with the passing of time they become a norm or modal. The test should provide a motivation for players of mean value ability to pitch their skill against good players, and then they improve their own rating.
A large number of tests were constructed to suite for the western population to suit their conditions and they are followed in India also. Further all these tests were designed to suite the old rules and regulations. Many rules have come up in the recent years and new techniques and strategies have brought sea change in the method of playing basketball. Hence there is a need to construct an objective skill test in basketball for grading students and selecting players for a team on the basis of their objectively demonstrated ability. The test may also be used for the purpose of classifying the players into equally strong and homogeneous groups as teams for facilitating instruction.

Further, it may be stated that primary purpose of skill tests is to help both physical education teacher and coach to evaluate their performance of their students in the fundamental skills of the game. Tests also serve the purpose of helping the coaches and the physical education teacher to measure the student’s performance and to evaluate his own teaching procedure and programmes.

High degree of performance depends on the expertise in fundamental skills. When a player has expertise in the fundamental skills of the game, a feeling of gaining command over the game exists. In order to measure these skills, tests should be conducted for evaluation purpose. Tactics will succeed only through individual fundamental skills. Therefore, every player must know about the importance of perfecting the fundamental skills. thus we can understand that only players with perfection in all the fundamental skills can become a top player.
In any competition a high degree of individual performance depends upon the particular individual’s mastery over the fundamental skills of the game. To win a game, the team members are to be coordinated to carry out their various tactical moves (Chandrasekaran, 1997).

Sports skill test are designed to measure the basic skills used in the playing of a specific sport. Because of the wide range of skills in most sports, a selection of the most important skill is invariably necessary. The selection is usually based keeping in mind the literature available, opinion of experts as well as by applying appropriate statistical techniques. The skill items collectively are called test battery. The skill test helps the students to evaluate their performance in the fundamental skills of the game and to provide an incentive for improvement. The test also serves the purpose of helping the teachers/coach to measure student’s/player’s performance and to evaluate their teaching/coaching procedure and programme.

**IMPORTANCE OF SKILLS**

When one has mastered the fundamental skills of the game, he gains a feeling of well being, thus high level of performance in basketball depends upon the mastery over the fundamental skills. The players are skilful in the game when they can make the best decision about where and when to play the basketball and then to perform the skills accurately. In any sports discipline the mastery over the fundamental skills is essential to the eventual success. A player will have a feeling of confidence when he masters over the skill.

High level of performance of basketball player may depend upon the physical variables or motor ability. The term physical
ability is used synonymously with general athletic ability. There are many factors that contribute to successful performance in basketball. The components of physical ability are speed, power, agility, endurance, speed endurance, strength, strength endurance, flexibility, co-ordination, explosive power abdominal strength are the required abilities of a basketball player.

**Significance of the Study**

1. The study identifies the important skills to be tested to evaluate the abilities of basketball players.
2. This study helps the Coaches and physical directors to select the players for their teams.
3. The test developed by this study can be used to give feedback to the players from time to time on the degree of progress they make in their ability. This study also helps in selecting the basketball players and planning and scientific training programs for them.

The purpose of the revised test was to measure basketball playing ability. Therefore, it has five skill tests Zigzag control dribbling, rebounding and shooting, passing and catching, malty shooting and zigzag defense. The revised sequence of phases is as follows: (1) variation of the Zigzag dribbling test in seconds (2) variation of the thirty seconds rebounding and shooting test; (3) variation of the thirty second total body movement shooting test; and (4) variation of the thirty second three box Passing Test, chest pass, overhead pass and chest pass. (5) Variation of the zigzag defense.

As the old skill test has taken more time for the testing, the new skill tests were constructed for the development of basketball players and for the assessment of the standard of the player.
TESTS AND MEASUREMENTS

In the history of test and measurements in this country several stages from anthropometrics to fitness have been experimented. Perhaps at the present time there is a renewed emphasis on evaluation of specific sport skills. This is a logical approach because education of the student in physical education generally must be done through the psychomotor domain. Therefore there is a movement to develop better skill tests. An AAHPERD Committee has developed a number of new tests and is in the process of developing others. Franklin Henry (1960) and his colleagues are correct in their contention that skills are highly specific to the task, more and better skill tests are needed in this area.

Skills mainly used in this Basketball skill test are:

- Passing
- Dribbling
- Shooting
- Rebounding
- Defensive Movement

A skill test in basketball is to assess the basketball playing ability. A skill test attempts to measure the performance in competition. Therefore they attempt to predict, highest form of validity, hardest to achieve. Some tests have aspects of more than one group i.e. (Combination Tests)
**Statement of the problem**

The study constructs the skill test for assessing the basketball players.

**Objectives of the Study**

1. The primary objective of the study was to construct the new skill test battery to assess the basketball playing ability of 16 to 19 years players.

2. The secondary objective was to construct the norms for the newly constructed skill test battery for 16 to 19 years basketball players.

**Delimitations**

1. This study is delimited to basketball Players of age 16 to 19 years from selected states.

2. The study was confined only to the male basketball players at high school and higher secondary schools in south India.

3. The study was restricted to five skill test like dribbling, defense, rebounding, wall passing and shooting.

**Limitations**

The following are the limitations of the study which need to be recognized while interpreting and generalizing the result:

1. Differences such as social, cultural and economical that exists among the subjects were not under the control of the investigator, which could be considered as limitation of the study.
2. Certain factors like personal habits, lifestyle, daily routine, diet, and climatic conditions, were not taken into account in this study.

**Definition of Key Terms**

**Test**

A test is a specific tool procedure or technique used to elicit a response from the players in order to gain information to be used as a basis for appraisal of the quality or quantity or elements such as fitness, skill, knowledge and values. The test is a specific tool of measurement and implies a response from the person being measured.

**Barrow.**

Tests are instruments, design to ascertain the quality of particular attributes possessed by students, teachers or an educational environment.

**Sheeham**

**Norms**

Norms are values considered to be representative of a specified population. They provide information for the individuals in the program and counsel to enable them interprets. Any individual’s score in relation to the scores made by other individuals in the same population. Norms are usually based on age, grade, height, weight, sex or the various combinations of these characteristics.

**Johnson and Nelson-1988**
“A norm is a scale that permits conversion from raw score to a score capable of comparison on interpretation.

**Barrow**

Norm is a standard point of reference, which provides a basis for judgment. To construct the norms following are the principles (1) sampling techniques (2) Equivalency (3).Progressivity (4) Sensitiveness.

**Criteria for Selecting Norms**

Even though there are many tests to measure the ability of individual attempt should be made to construct norms. Norms are very useful in classifying the students in particular activity according to their ability. Norms are also used to grade the student.

Sports Authority of India, Sports Training centre and State Sports Hostels are using physical variable and performance variables norms to measure the basketball player performance who seek admission in the above centers. Based upon the performance of the basketball players, they are ranked and admitted in the training centers. This motivated the investigator to conduct the study and to construct the norms.

**Variables of the Study**

The variables of the study are categorized as dependent and independent variables.

**Dependent Variable**

The dependent variable of the study is “Basketball Playing Ability”.
**Independent Variables**

Test Items developed and standardized by the investigator.

Test Items

1. Zig-Zag dribbling & straight dribbling test for Speed & control of ball handling in skill test.
2. Rebounding & Shooting for power & Accuracy of test.
3. Total body movement shooting for speed & accuracy.
4. Defensive movement Speed and skill.
5. Chest overhead wall passing for speed and accuracy.

**Criterion Test**

This is a test which is already established one with co-related reliability, validity, objectivity and administrative feasibility.

**Reliability**

Reliability refers to the degree, to which on test consistency measures a given factor. This is not to say that factor is necessarily the one that the test or measurement instrument is through to measure i.e a test may be reliable but not valid in the sense of measuring what it is through out to measured.

*Basco and Gustafson-1983*

Reliability may be defined as the consistency of measurement on the same individuals or group under the same conditions and by the same person (Bucher).
Validity

Validity is an estimate of the degree to which a test measures the factor for which it was designed.

Basco and Gustafson-1983

Validity can be defined as a device that actually measures what it is intended to measure. It helps to determine who is best and who is not best. A test is said to be valid, when it measures exactly what it purpose to be measured.

Validity is an all-encompassing term. The term validity is used primarily in terms of whether a test is relevant and applicable to the particular situation.

Objectivity

Objectivity is the degree to which the test or technique can be given by different individuals and obtained the same results.

Bucher

Measurement

Measurement is an aid to the evaluation procedure in that various tools and techniques are used in the collection of data.

Johnson & Nelson, 1982

Evaluation

Evaluation is the art of judgment scientifically applied some traits, qualities, characteristics in the universe according to some pre-determinants standards.

Barrow
Criteria for selection of Skill Tests

Bosco and Gustafson (1983) determined four criteria in the selection of test for construction, validity, reliability, objectivity and administrative usability.

Administration procedure

Administration is the process of managing or conducting a programme of activity.

Hugher

A successful measurement and evaluation programme is influenced with proper organization, systematic and scientific administration, accurate and validity method of scoring, proper rating scales and statistical interpretation. Step by step like planning, preparation, economy, facilities and time.

Skill

Skill refers to the level of proficiency in a specific task or limited group of task.

Fleishman-1964

Skill Test

It requires an environment similar to the game environment and standardized the procedure of administration. The validity of skill test is judged to some extent on the consistency between testing and performance environment.

Passing

Passing means “passing the ball within the teammates.
Dribbling

“Dribbling is bouncing the ball on the floor”. The ball is pushed to the ground with the fingers accompanied by the pumping action of the arm.

Shooting

According to John. M. Copper (1975), Shooting is defined “as the art of Propelling the ball towards the basket in a type of throwing motion with the use of one or two hands”.

Rebounding

“Rebounding means collecting the ball by the offensive player, when the ball rebounds after shooting”

Speed

Speed is the capacity of the individual to perform successive movement of the same pattern at the fast rate.

Power

Power is a function of force and time (Power is work/time) and is defined as the rate of performing work. (Work = Force X Distance)

Agility

Agility refers to the controlled ability to change position and directions rapidly and accurately.

Playing Ability

An individual fundamental skills maximized into the game skills during the real game situation may be termed as the
playing ability of the individual for the concerned game. This is assessed subjectively by way of experts rating.

**Talent Identification**

Coaches have constantly been searching for players, who can measure up to the requirements of the Game.

**Hanekom-2000**

The young athlete displaying certain skills and physical characteristics receives experts coaching and succeeds to national or international competitions.

**Malian and Bouchard-1991**