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A study of basketball skills among the public and private secondary schools students of Rupandehi District, Nepal

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DOI: https://doi.org/10.33545/27077012.2023.v4.i1b.150

Abstract
The aims of this study were to measure, compare and test significance difference the basketball skill in the boys of public and private secondary schools at Rupandehi District, Nepal. Descriptive types of quantitative research design were used. Secondary level boys' students were the population of this study. Random sampling method was used to select 60 players from 3 public and 3 private secondary schools at Butwal and Suddhodhan municipality of Rupandehi District. The investigator has taken Johnson readymade test batteries comparing three; field goal speed test, throw for accuracy and dribble test which were applied for collection primary data. SPSS version 20 was used analysis and interpretation of data. After treatment the data finding showed that there was no significant difference between two groups at 0.05 level of significant difference.

Keywords: Accuracy, basketball, dribble test, field goal speed test, private school, public school, skills, throw

Introduction
The ability to perform, sports skill perfectly and effectively upon the accurately judgment about the movement of objects in space (Cratty, 1968) [7]. According to Charles A. Bucher defined as "Integral part of total educational process, is a field of Endeavour which has its aim the development of physically, mentally, emotionally and socially fit citizen through the medium of physical activities which have been selected with a view to realize these outcomes" (Bucher, 1979) [6].

'Sports skill may be used to measure achievement in particular sports practice, individual progress for diagnostic purpose. It should serve as excellent motivational devices (Association of Indian University' [AIU], 1987) [1]. Basketball is a simple as well as popular and interesting game. Most of the private and public schools install facilities of the game. It was not at well-known to the most of the countries of the world till the end of the 19th century. Now days it has become the most popular game in the world (Jha, 1994) [9].

It is recognized as the 'National game' of America. It is very popular in most of the European and Asian countries. Dr. James Naismith introduced this game, first of all, in 1891 in Young Man Christian Association [YMCA] College of Physical Education, Spring field U.S. A Physical education is one of the fastest growing a level subject (Galligan, *et al.* 2000) [8]. "Physical education is an education with the help of physical activities range from walking, jogging, running, sprinting, hopping, jumping, climbing, throwing, pushing, pulling and kicking" (2010). "Skills are the learned abilities that athletes acquire through training and practice; skill may be defined as the ability to perform at a high standard efficiency of subject "(BBC, 2023) [4].

Basketball was introduced in India at 1904 'National federation of Basketball' was constituted in America at 1908. The rule of the game was first standardized in America at 1934. 'National Basketball Federation of India' was formed in 1950 (Sharma, n. d). In Nepal, Basketball Association was established in 1989 (2046 BS). It was brought in Nepal by Ex-Army. In the context of Nepal, Basketball is included in the curriculum of lower level to higher level. The skill of Basketball is Dribbling, Passing, Receiving, Shooting, Pivoting, Offending and defending (Minaham, 2010) [11]. The study is mainly concerned with the Johnson Basketball skills. Now a day secondary level boys have been aspired by the sports day by day but due to the lack of ground, training and physical facilities game have been neglected (Mahargan, 1999) [10].

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Though there is no efficiency of test batteries in Nepal, the researcher has felt it necessary to measure the skill test of different public and private secondary schools. The researcher has realized to study the Johnson basketball skills test on different secondary schools boys of Nepal. This study encourages and motivates the physical education teacher to identify the value of such test.

Methodology

This study mainly concern in skill test. Skill test reflects the ability of the players which is performed in specified sports. This study was based on descriptive types of quantitative research design. A sample of 60 boys students were selected on the basis of random sampling from 3 public secondary schools [3 × 10 = 30 players] and 3 private secondary schools [3× 10 = 30 players] of Butwal Sub-metropolitan city and Suddhodhan municipality of Rupandehi district, Nepal. Johnson readymade test batteries; Field goal speed test [30 second time base], Throw for accuracy [1 chance 10 trials were given] and Dribble test [30 second time base] were the tools for the collection of primary data. The tools (score sheet) were developed on the basis of practical work. The collecting data were analyzed and interpretation with SPSS version 20 to draw conclusion. After statistical treatment the data finding showed that there was no significant difference between two groups at 0.05 percent level of significant difference. This study compares all the characteristics of an individual which makes him unique and determines how boys react to their surroundings. It helps to select the suitable players for Basketball by the sports specialists, coaches, teachers of different institutions and sports council. The necessary requirement for data collection were; Basketball, Backboard, Stop watch, Score sheet, Space about minimum length from the wall 40 feet, A 60" × 40" wall [size of rectangle: inner rectangle 20"×10"; middle rectangle 40"×25"; outer rectangle 60"×40" and height of target 14"] and Five hurdle (Parihar, n.d.). The description and administration of Johnson Basketball skills test as follows.

a.   Field goal speed test (Barrow & McGee, 1979) [3]
Purpose: To measure skill to make successive field goal under the stress time.

Reliability: 0.755

Validity: Face validity is accepted

Instruction
Player was permitted to stand close under the basket in any position which made easy to basket the ball as many times as possible within 30 second. Single trial was given. One point was scored for every basket made'

b.   Throw for accuracy (Barrow & McGee, 1979) [3]
Purpose: To measure the ability of a consistently accurate throw and the strength of the shoulders.

Reliability: 0.750

Validity: Face validity is accepted

Instruction
The subject was permitted to stand behind the restraining

line and asked to throw the basketball to the target area up to 10 trials. He was motivated to make as many points as possible. One 3 point was scored for every ball hitting on the inner line, 2 points was scored for the ball landing in the middle rectangle and 1 point for the outer rectangle and line. The score was the total point made within 10 trials' (Parihar, n.d.).
c.   Dribble test (Barrow & McGee, 1979) [3]
d.   Purpose: To measure speed and skill of dribbling a basketball against the stress time'.

Reliability: 0.749

Validity: Face validity is accepted

Instruction
The student dribbled the ball in figure 8. performer was asked to stand behind the line and on the signal 'Ready' and 'Go' he was asked to start dribbling in and out the obstacles [hurdle] as possible within 30 seconds. Demonstration of same activity was made by testing. 1 point was counted every time the student passed the end of the hurdle. The score was the total points scored within 30 second' (Parihar, n.d.).

Result and Discussion

The available score were further treated in various ways to make them meaningful. The researcher has already stated that three test items of Johnson's basketball skills were used to collect the raw data from different schools players. Raw data gives the framework of analysis and interpretation of the study. In this study researcher has compared the scores of skills among private and public secondary schools. This study has to measure average, variability and significance by using SPSS version 20 through mean, standard deviation, variance, t-test, z-test and *p*-value. Event wise score are mentioned below.

Field goal speed test

After treating the data the mean, standard deviation and variance of field goal speed test score in basketball is as follows.

Table 1: Analysis of field goal speed test between public and private schools students

Items	Public School	Private School
No of Players	30	30
Mean	9.63	9.37
Standard Deviation	1.56	1.45
Standard Error of Mean	0.29	0.27
Variance	2.45	2.10
Minimum Score	7	7
Maximum Raw Score	13	12

The above table illustrates the mean, S.D, SE, Variance, Minimum score and Maximum score of the public school was 9.63; 1.56; 0.29; 2.45; 7 and 13. Similarly mean, S.D, SE, Variance, Minimum score and Maximum score of the public school was 9.37; 1.45; 0.27; 2.10; 7 and 12. This treatment shows that average test level of public schools' boys is slightly better than private schools boy player. It means skill level of any players depends upon their participation in sports and games. If players got opportunity to participate in the tournament frequently their skill level

would develop gradually.

Throw for Accuracy

At glance the basketball skills comparative pictures of the two groups in throw for accuracy is shown in the following table.

Table 2: Analysis of throw for accuracy among the students of public and private schools

Items	Public School	Private School
No of Players	30	30
Mean	19.43	19.67
Standard Deviation	2.60	2.35
Standard Error of Mean	0.47	0.43
Variance	6.74	5.61
Minimum Score	15	15
Maximum Score	24	24

The above table that the average level of throw for accuracy of public school boys was 19.43 and private school boys was 19.67. Similarly Standard deviation and variance of public schools was 2.60 and 6.74 and private school was 2.35 and 5.61. It means that the average throw for accuracy of public schools boys was slightly less than private schools boy players.

Dribble test

After calculating the data statistically the researcher had found the mean, standard deviation, variance, minimum raw score and maximum raw score of dribble test in basketball in below.

Table 3: Dribble test between public and private schools students

Items	Public School	Private School
No of Players	30	30
Mean	8.73	9.17
Standard Deviation	1.26	1.21
Standard Error of Mean	0.23	0.22
Variance	1.58	1.45
Minimum Score	6	7
Maximum Score	11	12

The above table shows that the mean, S.D., and variance of the public school students were 8.73; 1.26 and 1.58 likewise private school boys' mean, S.D. and Variance was 9.17; 1.21 and 1.45. It means that the average level of public school boys was slightly less than the private schools' players. If the player gets the opportunity to participate in the tournament frequently their skill level would gradually improvement.

Event wise comparison of two groups

For the comparison the researcher had calculate the mean differences [mean differ], degree freedom [df], level of significance [0.05], Z-value and *p*-value of basketball skill test score. The comparison table is given below.

Table 4: Comparison of Johnson ability test between public and private school students

Test Items	Z	DF*	*P* value	Mean Differ	SE ** Differ	Result
Field goal speed test	0.69	58	0.496	0.27	0.39	No significant difference
Throw for accuracy	-0.36	58	0.717	-0.23	0.64	No significant difference
Dribble test	-0.36	58	0.178	-0.43	0.32	No significant difference

Note. *=Degree of freedom; **= Standard error difference

The table mentioned above shows the combined picture of all three test items. In field goal speed test, the difference of mean [0.27], standard error difference [0.39], Z-value [0.69] and p-value [0.498] at 58 degree of freedom. The result found that there was "no significant difference" between two groups. The study of first row, which deals with field goal speed test, shows that calculated Z-value was less than tabulated Z-value at 0.05 percent level of significance and calculated *p*-value [0.495> 0.05] accepted the hypothesis. The study of second and third row, which deals with throw for accuracy and dribble test, showed that calculated Z-value was less than tabulated Z-value and calculated *p*-value was more than 0.05 [*p*>0.05]. Though the result was homogenous [no significant differences] in all rows. The field goal speed test score was higher in public schools boy players than private schools. Throw for accuracy and dribble test score were higher in private secondary schools boy players than public schools players.

Conclusion

From the result of finding the researcher had drawn to compared basketball skills test of players but did not found significant difference among public and private secondary schools students of Butwal and Suddhodhan municipality of Rupandehi district, Nepal. It means each schools player has similar skill in Secondary level. According to the significant comparison of the data treated by SPSS version 20 with the help of Z-test and *p*-value, the researcher has found "no

significant difference" in Johnson basketball skills of public and private schools boys. Even basketball throws for accuracy and Dribble test level of private secondary school boy students were slightly better than public secondary schools boy students. Public schools boy students also obtained slightly more score than private secondary school students in Dribble test. An analytical study can be done on any sports competition to find out the skill level in any game and sports on respective field. A similar study can be done about the skill test among the students of urban and rural area.

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