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## CONSTRUCTION OF BOWLING SKILL TEST IN CRICKET

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### ABSTRACT

*An attempt has been made to construct a bowling skill test in cricket with an objective to assess the accuracy level of the bowlers. The construction of the test has been done by defining specific target areas, divided into three zones near the batting crease. All the lines of the zones were included in their respective point area. The bowlers were separated into groups and each group was allowed to bowl one after another. Pearson's Product Moment Correlation was applied to calculate the reliability of the test. Also grades were formulated under Normal Distribution.*

**KEYWORDS:** *Assessment, Bowling, Target area, Grades, Skill.*

### INTRODUCTION

Many skill tests have been constructed especially in the last few decades. Skill tests are being used for selection processes in almost all the games and sports for better results. There are uncountable skill tests that have been constructed for different games and sports to check the level of the players in the respective sports e.g. football, basketball, hockey, badminton even in athletics. The game of cricket is emerging on a fast track in the present scenario but unfortunately there is a lack of skill tests that can be applied to predict the cricket playing ability of the players (Murtaza *et al.*, 2014). However many coaches all over the world use personal tests to evaluate the playing ability of the players but they vary in their content and design considerably. The reason behind this situation is that coaches seem to be different in their views and opinions regarding the major and important elements of the game. The quantitative measurement of the abilities of cricketers has never been made accurately by any standardized methods. Besides subjective evaluation, player's ability is usually judged by comparing his skill level with other players. (Stretch, 1984)

Bowling is a skill in which a bowler propels the ball in the direction of the wickets where it is defended by the batsman. Bowling in

cricket has a vital role. If the bowler is able to bowl in the right line and length of the pitch, more and more chance of deception for the batsman is obvious. There is a wide scope for the bowlers to manipulate the pitch while bowling. The cricket pitch is divided in various zones or spots where a bowler can bowl to get maximum benefit. All the spots can be beneficial only when the bowler is able to choose the right line and bowl with accuracy on the particular spot. Bowling in different lines, lengths and spots needs accuracy to become effective. If the bowler is lacking in accuracy, his bowling cannot be effective.

Researches in the field of training in cricket have proved to be very effective. Sports biomechanics, Sports medicine, nutrition, Physical fitness and many other areas are now contributing positively to understand the cricket player's overall development. In this article, an attempt has been made to construct a skill test in cricket which assesses the bowling accuracy of the bowlers. This test could be helpful in improving the standard of selection process in particular and improve the game of cricket in general.

**METHODOLOGY**

In this study, description of the test, procedure of test administration and scoring adopted for analyzing the data have been described.

**MARKING OF THE TEST**

A square of 9 inches with its centre is drawn at a distance of 3 meter from the popping crease. The front line and back line of the square must be perpendicular to the off-stump and leg-stump respectively. This zone represents the 3 point area, and is as per the standard measurement

of stumps in cricket, i.e. 9 inches. Now this 3 point area is extended by 9 inches from all the four sides, which represents the 2 point area. Similarly this 2 point area is again extended from all the four sides by 9 inches which represent 1 point area. Another square of 9 inches is marked in front of the stumps on the batting crease that also represents 3 point area and is also called Yorker zone. All lines are 3 cm thick and included in their respective point areas. Fig.1 shows the diagram of the test.

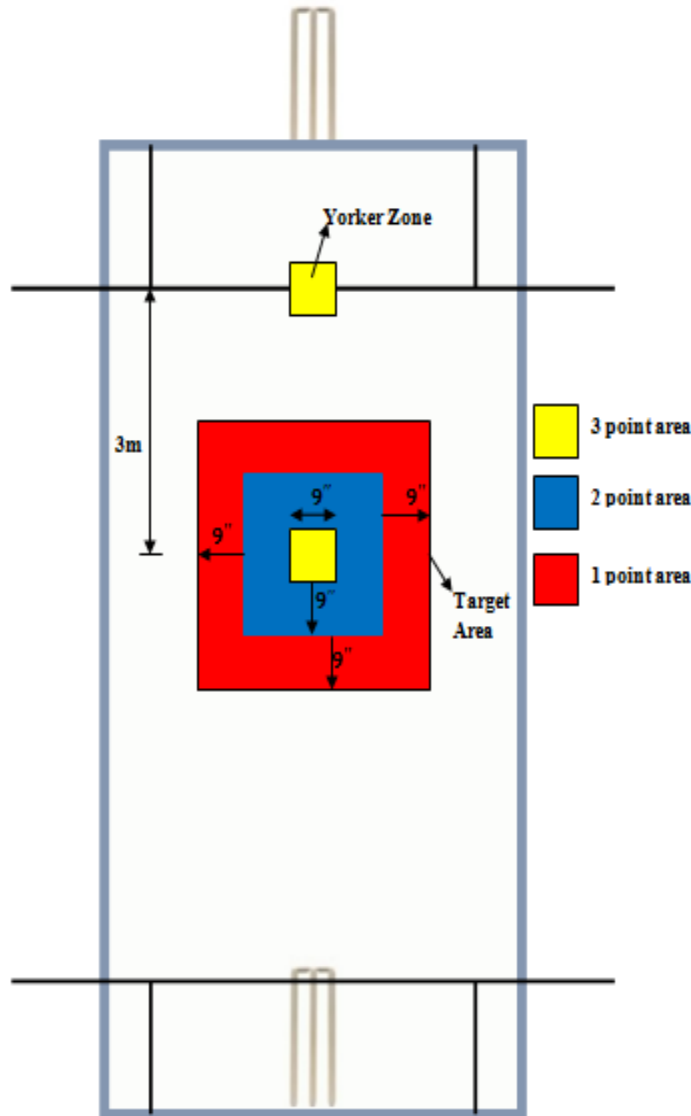


Fig 1

**ADMINISTRATION OF THE TEST**

For administration of this test natural even turf or a cemented turf is required. All the participants must be shown the demonstration trails so that they get an idea how to perform the test. Before starting, all the participants are allowed to go for a proper warming up. All the subjects are arranged in groups of six participants each. Now

each group of participants is asked to bowl one group after another. Six balls would be provided to six participants in a group (Woolmer, 2008). Each bowler is required to bowl a legitimate delivery as he normally bowls in a match, aiming at hitting the target area defined to score more points. Another group would be asked to bowl the next six balls after the first group has completed their six balls.

Same procedure would be followed by the rest participants and all the participants would bowl 18 balls each to score maximum points.

### SCORING

The scoring of this test is very simple. The number of hits on different areas in 18 balls

determines the score of the participant. If the ball hits the line of the target higher point will be awarded. A bowler can score a maximum of 54 and minimum score can be zero also. Table 1 shows the scoring of the test.

**Table 1 Scoring of the test**

| Target Area          | Points Awarded |
|----------------------|----------------|
| Hitting 3 point area | 3 point        |
| Hitting 2 point area | 2 point        |
| Hitting 1 point area | 1 point        |
| Beyond 1 point area  | 0 point        |

### COLLECTION OF DATA

The data was collected by administering the test for the selected test item *i.e.* accuracy during the month of March. The data was collected on 40 bowlers. The data was collected in two days.

Upon implementing this test, the performance of the participants was observed by the researcher, descriptive statistics was used to interpret the scores of the participants. Same test was implemented on the same subjects and the scores obtained were correlated with the previous scores to obtain the reliability of the test by Pearson's coefficient of correlation. Grades were awarded to the participants under Normal Distribution. Grading was classified in five types *i.e.* Excellent, Very good, Good, Average and Poor.

### RELIABILITY AND VALIDITY OF THE TEST

The reliability of this test was obtained by test-retest method. The test was implemented on 40 bowlers twice with a gap of three days. The scores obtained in the two trails were correlated by using Pearson's Coefficient of Correlation. The coefficient of correlation obtained was 0.932 and significant at 0.01 level. To validate this test, researcher has considered the face validity.

### STATISTICAL ANALYSIS OF DATA

After a perfect demonstration by the researcher, the bowlers tried their level best to bowl in the target area to secure more score. Upon observation by the researcher it was evident that the test was successful in checking the accuracy of the bowling of bowlers. Descriptive statistics of the test was applied by the researcher to understand the mean and standard deviation of the scores obtained by the participants. Descriptive analysis of the scores of the test obtained by the participants has been presented in the table 2.

**Table 2 Descriptive analysis of mean and standard deviation of the test**

| Name of the Test | Min. Score | Max. Score | Mean  | SD   |
|------------------|------------|------------|-------|------|
| Accuracy Test    | 7          | 33         | 19.82 | 7.44 |

The above table presents the descriptive measure for the skill test administered on 40 bowlers. In this test minimum seven (7) score and maximum thirty three (33) score was recorded. Whereas mean value was found to be 19.82 and standard deviation was 7.44.

### DISTRIBUTION OF GRADES UNDER NORMAL DISTRIBUTION

Grades were classified into five types *i.e.* Excellent, Very Good, Good, Average and Poor under Normal Distribution of scores obtained by the participants. The reason behind this classification is that the selection and evaluation criteria becomes easier, better and simpler. Grades have been presented in table 3.

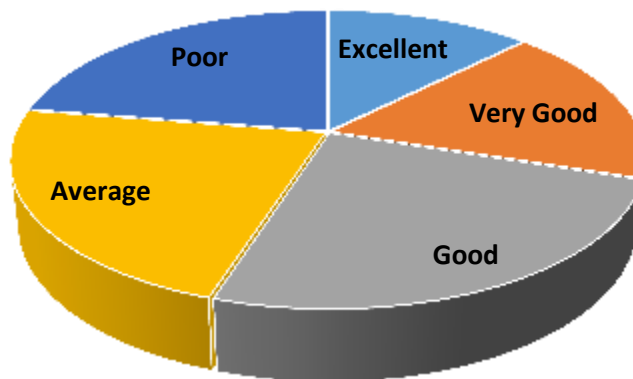
**Table 3 Distribution of Grades under Normal Distribution**

| Scores   | Grades    |
|----------|-----------|
| Above 30 | Excellent |
| 25-30    | Very Good |
| 20-25    | Good      |
| 15-20    | Average   |
| Below 15 | Poor      |

According to the criteria of grading framed by the researcher, 12.5% out of 40 bowlers were placed in 'Excellent' category as they secured highest scores. 17.5% were placed in the category of 'Very Good'. 25% bowlers were placed in 'Good'

category. 22.5% and 22.5% of bowlers find their place in 'Average' and 'Poor' category respectively. Fig.2 shows the percentage of bowlers based on the achievement of grades.

**Fig 2**  
**Chart representing the percentage of bowlers in respective grades**



**CONCLUSION**

The constructed skill test was found to be reliable. The coefficient of correlation between the scores of the test was quite significant. With the advent of the design of the preceding test of the bowling accuracy in cricket, coaches and players would find themselves in a much better place to improve their performance and preserve their confidence level. Moreover, the selection process will become more objective in cricket.

**REFERENCES**

1. Woolmer B, (2008). *Bob Woolmer’s Art & Science of Cricket*, South Africa; Struik Publishers.
2. Stretch R. A, (1984). *Validity and reliability of an objective test of cricket skills*. Unpublished Masters Thesis. Department of Human Movement Studies and Physical Education, Rhodes University, Grahamstown, South Africa.
3. Murtaza S. T., Imran M., Ahmad T., Sharique M., Jabin F., Ahmad S., Singh R. P., Bhat A.H., Katiyar A.K., Khan I., Kumar B., Pandey S., Khan S. A., Bhat R. A., Malik I. M., Naikoo S. A., and Zakir M., (2014). *Construction and Standardization of Fielding Test in Cricket*. Indian Streams Research Journal, Vol. IV, Issue VIII, ISSN: 2230-7850.