

## OBJECTIVE KNOWLEDGE TEST CONSTRUCTION ON HISTORY AND LATEST RULES OF FIELD HOCKEY

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### ABSTRACT

The purpose of the study was to construct the objective knowledge test on history and rules of field hockey for the degree students. The study was conducted on 150 students of Bachelor of Physical Education and Diploma in Coaching. After setting objectives, test blueprint was prepared. A 100 items objective test, subjected to careful analysis by the experts, as were administrated. The subjects were asked to complete within 90 minutes. Answers of the test were subjected to item analysis consisting of the difficulty rating and index discrimination. A total of 14 questions were deleted depending upon the results of the items analysis. The reliability of the test was established by using spilt halves method which was 0.642 for half of the test. Then the spearman Brown prophecy formula was used to prophecy reliability of entire test which was 0.684 at the 0.05 level of confidence. The co-efficient of correlation by test – retest method with selected test items was 0.89.

**KEYWORDS:** Knowledge Test, Rules, Field Hockey, Difficulty Rating and Index Discrimination

### INTRODUCTION

The measurement of knowledge in physical education activity classes is just as important as knowledge measurement in other subject. When the physical educator elects not to secure a measure of knowledge, he has ignored one of the major objectives of our field and has failed to capitalize on the potential of such tests to further the learning process. Evaluation of the students' knowledge of rules, strategy, etiquette and other pertinent information should be considered as an integral and vital part of every teaching unit. The tools employed in measurement of knowledge should be so designed that the teacher can easily determine what the students have learned in laboratory participation and from facts and materials presented within the unit.

Knowledge testing has probably always been a part of school physical education, however most attempts to measure knowledge have been done through the use of teacher made test. This is one type of knowledge test, which may be either objective or subjective in nature, but they have not been scientifically constructed ad devised.

Research and evaluation in physical education and sport should make for the progress of all forms of sports and help to bring about an improvement in the health and safety of participants as well as in training methods and organization and management procedures. The education system will thereby benefit from innovations calculated to develop better teaching methods and standard of performance.

Evaluation in physical education cannot be complete without the use of knowledge tests. The measurements of Knowledge in physical education activity classes are just as important as knowledge measurement in other subject areas.

In any game, be it indoor or outdoor, to have complete command, perfection is needed. This perfection comes out through certain skills and techniques. It is apparently clear that if a sportsman wants to declare his mastery over any game, he will have to be well equipped with the knowledge of rules, skills and strategy of that particular game.

Whenever possible, the teacher should develop his or her own knowledge tests construction of a knowledge test is a necessity because if one needs to administer any test, before that, one should know how to proceed step by step what to do first then after wards. Construction means to build up and when one builds up a knowledge test, then it will definitely lead to a successful physical education programme.

The modern game we know as hockey or field hockey, for those distinguishing it from ice hockey- evolved in the British Isles in the 19<sup>th</sup> century. It was a popular English School Game, possible adapted from the Irish game of hurling. The birth of modern hockey was from the period of 1875 was recognized. Qualified and new rules were made at that time. It was played with cork ball. A central organization to control the game to lay down a definite code of rules was established in Britain in 18 January, 1886 which marked the birth of modern hockey.

Deita and Freck (1940) proposed a Field Hockey knowledge test for girls of grades nine through twelve, composed of 77 true – false and completion statements. In preparing the test, consideration was given to comprehensiveness, administrative efficiency, and flexibility in regard to case of alteration with changing rules. The test was formulated from the author's teaching experiences. No validity or reliability co-efficient was being reported.

Kelly and Brown (1952) constructed an objective written examination on Field Hockey, designated for use with women majors in physical education who are prospective teacher's coaches, and umpires of Field Hockey. This test consisted of 88 multiple -response questions, designated to test following four major areas rules, techniques, coaching procedures, and officiating. Validity of the test was established by item analysis, by comparison of scores made by experts, major service subjects, and correlation of test scores with extended Field Hockey experience are with instructor's ratings of the competence of major students to teach the Field Hockey. The reliability coefficient for the test was between 0.79 and 0.89.

Objectives of the Study were set by keeping in view the learning level of the subjects and the utility of the test, the following objectives were set:-

- To see the knowledge pertaining to the history and development of Hockey.
- To develop an understanding of the basic rules of Hockey and their interpretation.
- New rules and their interpretations as adopted by Federation International de Hockey.

## **METHODOLOGY**

For the purpose of study 150 students of Bachelor of Physical Education and Diploma in Coaching were tested. All subjects had regular theory class during which different aspect of the game was explained together with practical implications. The test contents comprised history and development of game, new rules and their interpretations and terminology used in the game. A 110 items objective test was first administered to 30 students in order to determine clarity

of question items and on that basis the question item were refined and subjected to careful analysis. Then a second trial run of the question items was administrated to 150 students, which they answered. These sheets were then evaluated. Finally the test consisted of 96 objective type questions from different aspect of game in definite proportion. The item analysis was used to make decision about the individual test items. Difficulty Rating was determined by the percentage of students who have chosen the correct response for a particular test item. Index of Discrimination was use to provided information about the high and low performers on a specific test, who answered each item correctly. Using split halves method, a correlation between the correct odd and even numbered items were established. The spearman- Brown prophecy formula was used.

## RESULT AND DISCUSSIONS

The findings of the study indicated that the degree of difficulty rating for the knowledge test questions ranged from 0.11 to 0.91. The mean of difficulty rating was 0.536 those questions which were answered correctly by more than 80 percent of subjects were judged to be too easy and answered correctly by less than 20 percent were considered too difficulty. A total of test 8 items were eliminated from the test. Index of discrimination indicated those questions in which poor students did well or better than the subjects of the upper group. Such items were also excluded from the test because such items failed to discriminate the abilities of good and poor subjects. A total of 14 questions were eliminated for this reason. The reliability of the test was established by using split halves method, the value of coefficient of correlation of odd and even number with 96 test items was 0.642, which yielded a reliability coefficient of 0.684 for the entire test. The co-efficient of correlation by test-retest method with selected test items was 0.89.

**Table 1: Question Fall in Range**

Range	DR	ID
0.0 - 0.20	3	4
0.21 - 0.40	22	35
0.41 - 0.60	45	47
0.61 - 0.80	37	18
0.81 - 0.100	5	2
<b>Total</b>	<b>N=110</b>	<b>N=110</b>

## CONCLUSIONS

From the findings of the study it was concluded that (1) eight items were eliminated on the basis of difficulty rating which contained items answered correctly by the students below 20 percent and above 80 percent. (2) Six items were discarded on the basis of index of discrimination in which poor students did as well as or better than the upper group. (3) The revised test contained 96 objective type questions in Hockey for collegiate students.

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