CHAPTER 9

SUMMARY

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An individual is almost everyday confronted with problems in his spheres of activities. The solution of any such problem involves a choice among alternatives and the capacity to adapt to the new situation.

If the problem-solving ability of a child can be measured at a young age, it will help the child and the society in which he lives. Thus the need for such an instrument to measure the problem-solving ability of young children was felt for some time.

In the past, the tests developed in Gujarat are tests of intelligence and not of problem-solving ability. Even a verbal group test of intelligence for this age-range of 7+ to 11+ years does not exist in Gujarat.

The items based on various situations were collected from various sources, viz., the available books and tests, national as well as foreign. These items covered several situations arising in everyday life at home, school, playground etc. The author had personal discussions with experts about these items regarding their structure, content, and relevance to the purpose.

As a preliminary try-out, these items 198 in all,
were administered to 20 subjects of both the sexes. The personal experience gained by the author in this try-out was used to prepare the first preliminary form.

The first preliminary form of 93 items was administered to 60 subjects of both the sexes studying in standards III to VII. The difficulty level, discrimination, internal consistency and sex-bias were computed for each item (See Appendix B).

The second preliminary form of 112 items was prepared by dropping the unsuitable items and adding a few new items. Again the item analysis was done.

The final form of 100 items subdivided into 7 sub-tests was prepared. A complete lay-out of the test with simple and clear instructions was prepared. The test was printed in the form of a 16 page folder.

The reliability of the present test was calculated by split-half method, Kuder-Richardson formulae, Hoyt's method and test-retest method. The coefficients of correlation obtained have shown a fairly good reliability of the present test. The different types of validity, viz., face validity, construct validity and concurrent validity, were computed by using the already available tests and the examination marks. These
procedures of validating the present test demonstrate a satisfactory validity. As the present test is mainly of a diagnostic type, no attempt to find predictive validity was made.

The test can be administered to an individual or to a group of individuals. Scoring with a hand scoring key takes about a minute only. It provides the total score as well as seven different scores for each subtest. The raw scores can be converted into percentile ranks by using the conversion tables.

The norms of the present test are based on a sample of 1,010 subjects of both the sexes drawn from various primary schools in Ahmedabad.

The norms are given for the entire test, for each grade and for different ages.

Limitations And Caution

In tests like the present one, the scores are affected by the two factors, viz., (a) motivation and (b) guessing. The disturbing influence of motivation can be minimised by establishing proper rapport between the test administrator and the subjects. Various methods have been evolved to nullify the distortions in the scores introduced by guessing. The present author has made no attempt to investigate the nature and extent of
the effects of guessing. However, the experience gained during the administration of this test has shown that a large majority of subjects studies well and gives a good thinking for each item before giving the replies.

It should be remembered that there are certain limitations for the use of the present test, even though it can rightly claim to measure successfully the problem-solving ability of a Gujarati speaking primary student.

Although the present test is successful in finding each individual's relative position in the ranking scale, the scores of this test alone should never form the basis for taking an important decision.

The test is very convenient for group administration. It should be used as an aid to measure the problem-solving ability of an individual together with relevant information from other sources.

The effects of 'practice' vitiate the scores. Hence, a great caution should be taken and a strict secrecy maintained about the test.

In spite of the fact that various procedures have revealed satisfactory reliability and validity, the present test results should be interpreted with
extreme caution and care in taking any crucial decision about an individual or a group. It is advisable used for any individual or individuals studying in Gujarati medium primary grades of III, IV, V, VI and VII.

Suggestions

1. No systematic attempt was made to assess the nature and extent of the influence of guessing in the present test. An empirical research work may be undertaken to measure the effect of guessing.

2. The reliability and validity was computed for the entire test. A well-planned work can be undertaken to estimate the reliability and validity for each factor separately.

3. A similar test of problem-solving ability can be prepared for students of grades I and II.

4. The factorial structure of the problem-solving ability may further be investigated in details.