

CHAPTER IX

SUGGESTIONS FOR FURTHER RESEARCH

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9.1 The Present Study

Some general findings and their implications have already been discussed in the last chapter. It is appropriate now to look to the future and to think about the possibilities of some further research suggested by the present investigator. The investigator thinks that a good battery of tests has been adopted and/or developed for aptitude testing of secondary school pupils. It is hoped that these tests would prove useful in guidance and selection in secondary schools.

The investigator, however, is aware of the limitations of the present study. He feels that such study may be said to be complete in one aspect only and is a step forward in the direction which opens up new vistas of work and further studies. It shall be the endeavour of the present writer to suggest possibilities of such further work taking the present study as a base and an important tool to work with. He hopes, some of these suggestions may be covered in future studies.

The present studies of reliability and validity were

based on a single group of Hindi medium schools in Delhi. It is hoped that these tests would be used by Hindi speaking schools outside Delhi too. It would, therefore, be useful to find reliability etc. on larger and more representative groups. The studies may also be reported separately for either sex.

The sample size and the range of talent are important factors in the size of correlations. These, therefore, affect the reliability and validity coefficients also. More heterogeneous the group, higher will be the size of coefficient and vice versa. It would be, therefore, useful to study the validity and reliability on several groups.

As already reported, the present was limited to the class IX. Further studies on class X and XI would be needed to fully utilise the benefits derived from this investigation. Likewise, validity may also be studied on different samples. The present investigation mainly describes estimates of predictive validity. Although this is certainly the most important aspect of the present investigation or for that reason of all aptitude testing, other types of validity studies may be further added. Thus, for example, concurrent validity with school grades, recognized tests of general intelligence or aptitude, interest inventions etc. can be the subject matter of one or more further investigations. Likewise, factorial validity may also be studied. One cannot expect these tests to be factorially pure, i.e. unifactor. The DAT battery, as already mentioned at appropriate places,

consists of tests of abilities which have proved to be good predictors, either singly or collectively, of success in school or occupation. Pragmatically, the DAT battery has stood the test of time though factorially the tests do not represent a series of unifactor and independent tests. A thorough factorial study, however, may lead us to several other findings about the structure of abilities themselves. Such study may also probably point out any other important ability which need be represented and may also, perhaps, indicate the need of alteration of any existing test. It is clear that such further studies will help to make the battery more useful.

Norms.-- India is a vast country of different languages and dialects of the same language, which may be quite distinct from the mother language. Hindi is spoken by about one third of the total population of the country and it is but natural that there exist several distinct groups within the so-called Hindi area, which may not be easily comparable. It is suggested, therefore, that the regional norms may be prepared. General norms for such a test like this are neither desirable nor perhaps possible. It should be kept in view that the characteristic of the groups on which normative data may be based may be defined as far as possible. If national norms are to be prepared, the samples be selected by a very rigorous sampling technique, and properly stratified. As this is not always possible to stick to the local norms, at best regional norms,

based on several homogeneous groups, academic and occupational, "Norms must be relevant... (and) our better understanding of an individual through test depends, then, largely upon our having diverse and well defined set of norms."¹ Seperate norms may be obtained for sex, grades and age-groups.

Follow-up studies.-- A quality of the original DAT battery is that a number of important follow-up studies have been reported, one of which is a seven year follow-up. It is obvious that such longitudinal studies on the identical individuals throw a new light on the several facets of the aptitude pattern in general, besides providing a very useful criterion for the empirical validity. It would be useful, therefore, to follow-up the results of the subjects in the present sample to their later achievements. This would provide a useful clue to the shifting of aptitudes and would reveal a knowledge of abilities in the school grades which are important for a later success in any specific vocation.

Spelling Test.-- In an earlier chapter, the write discussed why the LU-sp test is more correlated with several academic subjects, rather than LU-g, unlike U.S.A. where the contrary is true. The investigator suggested that probably the performance in a spelling test in Hindi (or any other Indian languages) is indicative of the degree of intelligence or 'g' one possess.

1. H.G.Seashore and J.H.Ricks, "Norms must be relevant," Test Service Bulletin, The Psychological Corporation, New York, no. 39.

This was possible explanation and a further investigation on this hypothesis will be worthwhile and probably throw new light on the characteristic of Indian languages. It would also add to our existing knowledge in psycho-linguistics.

Urban-rural studies.-- It may be interesting to study Urban-rural differences in aptitudes. If such differences exist, it would be interesting to probe deeper and to know what are the areas where the differences exist. In the present stage of our planning, when the nation is trying hard to utilise the existing talent, an investigation into this problem becomes extremely important and practically useful. This is especially important for the country as India where a huge majority of the population originate from the rural areas. It may also be interesting to investigate if there are any significant differences in structure of abilities and what are the factors that might be impeding the full expression of pupils of rural areas. Such an exploration would lead us to frame new or improve existing policies.

Further adaptations.-- This study has resulted in eight tests-of which three are verbal (Hindi). The others are essentially non-verbal, except the 'Direction' portion, which are in Hindi. The verbal portions of these may be easily translated into some major Indian languages and the tests may then be usable. Other three verbal tests-Verbal Reasoning, Language Usage-spelling and Language Usage-grammar, however, would have

to be prepared anew in each language. It is hoped that such a further study may be taken up at a later stage. Such studies would stimulate a wider use of the tests, help the improvement of assessment methods in different regions and make possible intra-regional comparisons.

Other important area of future work may be the study of social implications of aptitude testing. It would be interesting to know how the socio-economic status and/or the social structures e.g. caste-groups affect the structure of abilities.

The above are some of the possible lines along which further researches may be attempted. Each further step would open new fields for still further investigations. We need a chain of such researches, resulting in the development of basic tools for better assessment. The present investigator is happy that he has been a link in this important task.

9.3 Summary

Some possible lines for further research have been outlined. These include:

- (1) Further reliability and validity studies on different groups, both academic and occupational,
- (2) reliability and validity studies for grades X and XI, different age-groups and for sex,
- (3) normative studies on homogenous groups, for local and regional norms;

(4) further follow-up studies which may reveal important proportion of aptitude structure and they also provide important criteria for extrinsic validity,

(5) attempts for adaptation of the tests in various languages, and

(6) studies on the effects of various socio-economic factors on the expression and development of aptitudes.