

## **CHAPTER VIII**

### **SUMMARY, CONCLUSION AND SUGGESTIONS FOR THE TEST USERS**

#### **8.1 INTRODUCTION**

In this chapter, an attempt has been made to give a complete report of the procedure adopted in the construction and standardization of IETAT for the pre-service teachers along with the suggestions for the test users.

#### **8.2 THE IETAT**

Out of the number of factors that are supposed to be indicative of the 'teaching aptitude' for providing inclusive education, the following five factors have been selected on the basis of analysis of a questionnaire issued to SMEs in the field of teacher education and inclusive education numbering 16.

1. Knowledge about inclusive education
2. Perceived Ability to identify disabilities
3. Attitude towards teaching CwSN
4. Perceived Ability to adapt inclusive teaching methods
5. Skills to manage an inclusive classroom

Initially, 97 items have been constructed based on the factors listed out and the test consisted of five sections. Twenty seven items have been removed due to low content validity. The pilot test consisting 70 items was translated in Gujarati language for administration in the TEIs of Gujarat. After the pilot test administration and valuation of answer scripts, the test items have been rearranged in the light of difficulty and validity indices calculated, for each of the test items. Twenty items had to be deleted in the final test in view of their low and negative validity indices. The final form of the test consisting of the five sections (10 items per section) was prepared in a booklet form (refer to Appendix XI). Separate printed answer sheets were supplied to the pre-service teachers to record their responses (refer to Appendix XIII).

### **8.2.1 Population**

The population included all pre-service teachers of the Gujarat state pursuing their B.Ed.-I [First Year] for the academic year 2016-17. A sample was drawn from the population for the standardization of the IETAT.

### **8.2.2 Sample**

The total sample for the present test consisted of 552 pre-service teachers of thirteen TEIs of eight universities of the Gujarat state randomly drawn through lottery method. The sample of 552 pre-service teachers was drawn purposively.

### **8.2.3 Mode of Administration the IETAT**

Before the administration of the final test, necessary instructions were given on the front page of the test booklet for the guidance to pre-service teachers before answering the test.

### **8.2.4 Time Limit**

The total time for the whole test was fixed to 35 minutes which was strictly followed. The pre-service teachers answered the test items in the prescribed time. Care was taken to check that no respondent omits any item.

### **8.2.5 Scoring**

One mark was allotted for each of the correct items of the test and the maximum obtainable score in the test was 50. The key that has been prepared to facilitate the scoring is given in APPENDIX XIII.

## **8.3 THE RESULT**

1. The highest score obtained in the test was '35' while the lowest score was '7'. The range between the highest and the lowest score was, therefore,  $(35 - 7) + 1 = '29'$ .
2. The mean, median and SD of the whole sample (552) were found to be 20.57, 20.55 and 5.42 respectively.

3. The nature of the frequency distribution was studied in three ways viz. through the measures of divergence, through the chi-square test and through the best fitting normal curve.

**(a) Through measures of divergence:**

- The measures of divergence of the frequency distribution are the skewness and kurtosis.
- The value of skewness was found +0.01 and +0.03 as per the formula I and II respectively.
- The type of skewness in both the cases indicated a positive value.
- The value of kurtosis was found to be 0.2527 and the value indicated that the kurtosis is slightly leptokurtic.
- Both these divergences are not significant and the distribution is normal.

**(b) Through Chi-square test:**

- The calculated value of chi-square is found to be 2.548 which is less than the table values at 0.01 and 0.05 levels of significance. This also testifies to the normality of distribution.

**(c) Through the best-fitting normal distribution curve for the test-scores**

- The best fitting normal curve for the test scores drawn on the page no. shows that the whole curve fits in with the obtained distribution well enough to warrant treatment of data as normal.
- The distribution of the test score is, thus, taken as normal.

4. The reliability of the test was estimated by the following three methods.

- (i) Split-Half method
- (ii) Hoyt's method
- (iii) K-R Formula

The results obtained by the use of different methods are given below:

- |       |                   |                          |
|-------|-------------------|--------------------------|
| (i)   | Split-Half method | 0.970 with P.E.R. 0.0001 |
| (ii)  | Hoyt's method     | 0.613                    |
| (iii) | K-R Formula       | 0.648                    |

Thus the reliability of the test is fixed at 0.75 and is found to be quite satisfactory.

5. The validity of the test is estimated by correlating the standard test scores with the standard criterion scores in Inclusive Education subject taken as criterion score. This has given the predictive validity and it is found to be 0.51.
6. The following types of norms are established for the present IETAT.
  - (i) Standard score norms
  - (ii) Percentile norms
  - (iii) T-score norms
  - (iv) Letter grade norms
- (v) Thurstone's centroid method of factor analysis was applied to the test data. The factor analysis revealed the presence of two factors viz. knowledge about inclusive education and attitude towards teaching CwSN.  
The other factors included in the list viz. ability to identify disabilities, ability to adapt inclusive teaching methods and skills to manage an inclusive classroom, could be well included under the factor awareness about inclusive education and perceived ability to teach SwSN.

#### **8.4 CONCLUSION**

The test items included in the IETAT numbering 50 based on the five factors comprising teaching aptitude for inclusive education measures the inclusive education teaching aptitude to a considerable degree. The information obtained about the pre-service teachers' teaching aptitude for inclusive education through the IETAT is to be supplemented further with the information about their performance in the subject, interest, ability, and attitude before a final decision is arrived at with regard to his possessing a real teaching aptitude for inclusive education. The distribution of the scores obtained by the pre-service teachers is normal and it suggests that a majority of the pre-service teachers coming under the average group do possess some kind of aptitude for teaching in an inclusive setting. The reliability and validity of the test are found to be quite satisfactory and the test serves a useful purpose of measuring inclusive education teaching aptitude of pre-service teachers. The test may also help to the stakeholders involved in admission at pre-service levels both in general as well as special teacher education. The test scores may help the university authorities/TEI heads to enroll the pre-

service teachers possessing aptitude in teaching CwSN at inclusive setting in terms to prepare them for inclusive education. The classification of respondents according to letter grades is given below:

**Table 8.1**  
**Classification of Pre-service Teachers according to Letter Grades**

<b>Letter Grade</b>	<b>Limits of Raw Scores</b>	<b>Frequency</b>	<b>Teaching Aptitude Status</b>
A	35 and above	1	Very high
B	Between 30 and 34	23	High
C	Between 25 and 29	106	Above average
D	Between 20 and 24	191	Average
E	Between 15 and 19	162	Below average
F	Between 10 and 14	59	Poor
G	9 and below	10	Very poor

Grade A and B suggest that pre-service teachers who are assigned this grade possess the high aptitude for teaching in inclusive education and that they would make excellent teachers in inclusive schools. One can enroll such candidates in TEIs or recruit in inclusive schools. Grades C, D, and E indicate decreasing magnitude of aptitude for inclusive education teaching aptitude possessed by the respondent pre-service teachers. The grade F and G suggests that pre-service teachers who are assigned this grade possess the extremely low aptitude for teaching in inclusive education and that they would make very poor teachers. Such teachers should be eliminated for training in inclusive education or recruiting in inclusive schools. It would be advisable, therefore, to reject a pre-service teacher who scores, on this IETAT, 9 and below as he/she should be considered unacceptable to teach in inclusive education. Thus in selecting pre-service teachers for inclusive education, care should be taken to eliminate poor teachers from the beginning.

To conclude, though the efforts have been made to make the present IETAT as much scientific and comprehensive as possible it cannot be claimed that it is the perfect one and

above any improvement as the items included in the test are 50 only. Adding more items may further improve the test and make it perfect one.

### **8.5 SUGGESTIONS FOR TEST USERS**

If tests are to be applied and interpreted properly, the test administrators should acquaint themselves with the limitations of the test, its analysis and thereby understanding the underlying the principles thoroughly. The more accurate result can be obtained if the test is handled by skilled persons. It is, therefore, necessary that the present IETAT should be used by the skilled persons. It is therefore important that the users of this IETAT acquaint themselves with the test and the procedures of administering and scoring as for comparing obtained scores on the test with the test norms, administration, and scoring in standardization procedure of the test is required. This IETAT is a group test, however, it can be administered individually too and the procedure of administering and scoring are same in both case. The users of present IETAT should study the following suggestions between lines and carry them out thoroughly to achieve useful and better result.

1. The testing is required to handle by skilled persons for more accurate testing of inclusive education teaching aptitude of pre-service teachers.
2. The test users should have knowledge of inclusive education, teaching aptitude and assessment.
3. It is an utmost necessity that the test user acquaints himself/herself carefully with the test, administration procedures and scoring.
4. The test manual should be procured, read and understood thoroughly.
5. The users of the present IETAT should be clear about the purpose of using this test. This IETAT may be used for any one of the following purposes.
  - (a) For selecting prospective teachers in terms to train them for inclusive schools both in general as well as in special teacher education courses.
  - (b) For employing untrained teachers in the inclusive schools.
  - (c) For selecting teachers in inclusive schools.
6. The test users should know the reliability and validity of the present IETAT and decide themselves how far the test will serve their purpose.

7. The printed instructions given on the front page of test booklet must be studied carefully and should be followed. The test users should also note the oral instructions to be given orally before administration of IETAT.  
No change should be made in printed or oral instructions as it would affect the test and established norms.
8. The respondents being invariably matured persons, the psychological atmosphere for the test may not be required compulsory but care needs to be taken care about their comfortability in the testing room like mental as well as physical setup.
9. While administering the present IETAT, the user needs to follow the following procedures.
  - (a) Distribute first the answer sheets and instruct the respondents to fill the general information given on the back side page of the answer sheet.
  - (b) Distribute the test booklets with instructing the respondents to read carefully the printed instructions given on the front page of the test booklet.
  - (c) Any legitimate question/query/doubt from any respondent should be clarified.
  - (d) Ask the respondents to open the page no. 2 of the test booklet and start answering items in section I with an instruction to read the direction of answering given at the top of the answer sheet.
  - (e) The respondents should not ask any question to fellow respondents or look into others answer sheets while answering the items. They should be allowed to ask the meaning of difficult words to test administrators.
10. The time limit of the test should be strictly followed for maintaining the difficulty level of items. The respondents should be well aware of the time limit in the beginning.
11. The respondents should be well informed at the outset that they have to respond all the items and omit none. The test administrator should make sure that each respondent has answered all items while accepting his/her answer sheet at the end.
12. The whole test should be administered at a time.
13. The scoring keys must be followed as meticulously for applying the test. The test users may find some other alternative as good or better than the given in the scoring

key in some items. But personal opinion may cease the scoring to be objective and makes the result incomparable with the test norms.

Even though the reliability and validity of the present test are reasonably satisfactory, the test users, however, should be careful in interpreting the test scores because besides aptitude test score, other information like performance in subject, interest, ability, attitude and knowledge of subject also needs to be taken into account before a final decision is taken about real aptitude and to predict their future level of attainment. The IETAT score, together with this detailed information about the pre-service teacher, will enable the test user to predict the respondent's probable success in teaching in inclusive school.