## APPENDIX- N <br> MANUAL FOR TO MEASURE ATTITUDE OF STUDENT TEACHERS TOWARDS EDUCATIONAL TECHNOLOGY WITH NORMS AND SCORING KEY.

## Purpose and Use:

Educational Technology is very useful for effective and successful teacher. The subject plays very important role in teacher education programme. Educational Technology is an optional subject in the prescribed syllabus for $B$. Ed. course. This attitude scale measures the attitude towards Educational Technology of the student teacher and allowing the student teacher to select, to select Educational Technology at B. Ed. level. Attitude toward a subject of study will encourage student to pursue the study of that subject.

## Definitions of Attitude

In words of Kuppuswamy, 'An attitude is defined as a mental or neural state of readiness organised through experience, excreting a directive or dynamic influence upon the individuals response to all objects and situations with which it is related'.

According to Anastasi 'An Attitude is defined as a tendency to react favorably or unfavorably toward a designated class of stimuli'.

## Plane of Attitude scale.

For construction of a scale the researcher made a detailed programme of activity which was related to nature of work.

First prescribed syllabus of Educational Technology recommended by Shivaji University for B. Ed. course was studied and found out the major core area which were important for Educational Technology. The researcher determined the method for constructing the scale by studying the various reference books. Then the researcher started constructing the items for scale by considering the aspects of Educational Technology. The first draft of the scale was prepared by considering the objective of the problem. The finalised first draft was given to expert team for evaluation and by evaluation from experts, modification done in the items as per instructions and remarks of experts. Then modified draft given to students for tryout purpose. And then given to large scale invited sample.

## Administration-

For an Attitude scale administration should be normal. A scale can be administered to person as well as to group of person 25 to 50 still larger number can be handled with the help of assistant, supervisors and the public address systems. (loud speakers)

Attention should be given to the selection of a suitable testing room. Such a room should be free from undue noise and distraction and should provide adequate lighting, ventilation, seating facilities for the subjects. The subjects should be seated comfortably and as far as possible should not have a chance to talk to other students or glance at their answers.

The supervisor should explain purpose of attitude scale to student teachers. A attitude scale is self administering. All the
instructions are printed on the front of cover page of the scale. The supervisor should read out these instructions to student teachers and explain to them whatever is necessary. The following points are emphasized.

1. The result is useful only if the subjects have honest answers.
2. Answersheet is separate and all the answers must be marked as per instructions. No marks be made in the test booklet.
3. The needed biodata be filled in the answersheet. The supervisor should see this personally.
4. There is no time limit but subject should work as fast as possible (the tentative limit is considered to be about 45 min .)
5. The answers of the individuals will be kept confidential.
6. It the subject has difficulty in understanding the meaning of the words or statements, the supervisor may be consulted.
7. The use of separate answersheet may be properly explained and demonstrated on the blackboard.

After the test is over, the answer sheet as well as the test booklet of every subject be collected. The subjects should not be allowed to walk away with these materials.

Scoring
Scoring is done with the help of scoring key A scale contains $50 \%$ positive attitude items and $50 \%$ negative attitude items scoring is done as -

| For positive attitude item | 54321 |
| :--- | ---: |
| For negative attitude item | 12345 |

Validity-
The content and face validity has been ascertained by opinions of experts while initially constructing the items and preparing the scoring key.

Reliability
The reliability coefficient for different colleges were calculated by test, retests method. The total sample was 400 student teachers. Test was administrated twice to this sample with an interval of about 20 days. All mentioned areas have reliability as shown in the table below.

The reliability co efficient for different colleges.
Sr. Colleges
Reliability co-efficient ' $r$ '

1. Azad College of education, Satara - 0.94
2. College of Education, Karad - 0.89
3. B. Ed. College, Patan - 0.95
4. College of Education, Phaltan - 0.92
5. Y. C. M. Open University, Nasik - 0.87

Split up type of questionnaire - 0.99
(Y.C.M. Open University, Nasik.)

## Norms-

Establishing norms is the essential part of standardization. Norms measures the relative position of the individual in the group.

Means were calculated for female and male student teachers, urban and rural student teachers, and regular and distance education student teachers. The difference of the mean were test for significance. As the majority difference of female and male student teachers, urban and rural student teachers, urban male and rural male student teachers, regular and distance education student teachers, regular male and distance education male student teacher were statistically significant, therefore Norms are given separately.

The table given below should be used for interpretation of raw score.

H- indicates highly favourable attitude
A- indicates for average attitude
L- indicates unfavorable attitude.

Interpretation of Raw scores

| $\begin{aligned} & \mathrm{Sr} . \\ & \mathrm{No} \end{aligned}$ | Area | $\begin{aligned} & \text { cate } \\ & \text { gory } \end{aligned}$ | description | Range of score for |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | male | female |
| 1 | Total female <br> and male <br> student  <br> teachers  | H | High | above 350 | above 336 |
|  |  | A | average | 308-350 | 285-336 |
|  |  | L | Low | Below 308 | below 285 |
| 2 | Urban \& Rural student teachers |  |  | Urban | Rural |
|  |  | H | High | above 362 | above 330 |
|  |  | A | average | 296-262 | 289-330 |
|  |  | L | Low | below 296 | below 289 |
| 3 | Urban   <br> Rural male  <br> student   <br> teachers   |  |  | Urban-male | Rural-male |
|  |  | H | High | above 358 | above 314 |
|  |  | A | average | 291-358 | 282-314 |
|  |  | L | Low | below 291 | below 282 |
| 4 | Regular 8\% Dist <br> Education <br> student <br> teachers |  |  | Regular | Dist Edn |
|  |  | H | High | above 345 | above 333 |
|  |  | A | average | 293-345 | 286-333 |
|  |  | L | Low | below 293 | below 286 |
|  |  |  |  | Regular Male | Dist.Edu.Male |
| 5 | Regular male 8s Distance Edu. male student teachers | H | High | above 338 | above 317 |
|  |  | A | average | 286-338 | 277-317 |
|  |  | L | Low | below 286 | below 277 |

SCORING 프는

| SR NO | attridde | SRNO | Atittude | SR NO | ATITTUDE | SR No | AtITTUDE |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | + ve | 28 | -ve | 55 | -ve | 82 | + ve |
| 2 | + ve | 29 | - ve | 56 | + ve | 83 | -ve |
| 3 | + ve | 30 | - ve | 57 | -ve | 84 | + ve |
| 4 | + ve | 31 | + ve | 58 | - ve | 85 | + ve |
| 5 | + ve | 32 | + ve | 59 | + ve | 86 | - ve |
| 6 | + ve | 33 | - ve | 60 | +ve | 87 | +ve |
| 7 | + ve | 34 | -ve | 61 | - ve | 88 | - ve |
| 8 | +ve | 35 | + ve | 62 | -ve | 89 | -ve |
| 9 | + ve | 36 | -ve | 63 | -ve | 90 | -ve |
| 10 | + ve | 37 | + ve | 64 | + ve | 91 | - ve |
| 11 | -ve | 38 | + ve | 65 | + ve | 92 | + ve |
| 12 | + we | 39 | +ve | 66 | - ve | 93 | + ve |
| 13 | -ve | 40 | + ve | 67 | + ve | 94 | + ve |
| 14 | -ve | 41 | -ve | 68 | -ve | 95 | + ve |
| 15 | + ve | 42 | -ve | 69 | -ve | 96 | + ve |
| 16 | + ve | 43 | + ve | 70 | + ve | 97 | - ve |
| 17 | -ve | 44 | + ve | 71 | -ve | 98 | - ve |
| 18 | -ve | 45 | -ve | 72 | - ve | 99 | + ve |
| 19 | -ve | 46 | + ve | 73 | -ve | 100 | + ve |
| 20 | - ve | 47 | -ve | 74 | - ve |  |  |
| 21 | - ve | 48 | -ve | 75 | - ve |  |  |
| 22 | + ve | 49 | -ve | 76 | + ve |  |  |
| 23 | -ve | 50 | + ve | 77 | -ve |  |  |
| 24 | -ve | 51 | + ve | 78 | - ve |  |  |
| 25 | - ve | 52 | + ve | 79 | + ve |  |  |
| 26 | -ve | 53 | + ve | 80 | -ve |  |  |
| 27 | +ve | 54 | + ve | 81 | -ve |  |  |

