CHAPTER IV

PLAN OF STUDY
AND
RATING SCALE USED

The study of this problem is divided into two different heads. (1) Preparation of the rating scale, and (2) collecting the proper sample upon which the rating scale is to be administered.

PREPARATION OF RATING SCALE

The opinions of the experts were collected (Table No.2) on the Opinion Sheet on five different items on the five point scale. Each item represented a group of behaviour related to the teacher's duties.

THE SOURCES

It was thought proper to know the characteristics and qualities of a successful teacher. So, the direct contact
with teachers, head-masters, educational administrators and the writers of educational psychologists was perhaps the best and more reliable source for our purpose.

Teachers and others who are directly in contact with teaching work, and the supervision programme can contribute a lot of material in this connection, because of their first hand informations and acquaintance with it. Supervisors and headsof the institutions are observing their colleague's work constantly, and so it was felt that they could tell better about the characteristics and qualities for a teacher to be successful in his job.

As a first step for constructing Rating Scale (to study this problem) view of long experienced senior teachers were sought regarding the characteristics of a successful teacher. A personal approach was also made to them (head-masters, and senior teachers) in this regard.

PROCEDURE

Sixty senior teachers with long teaching experience and head-masters of the secondary schools were requested to write down the essential qualities of a successful teacher. They were requested to write their opinions in the form of the statements defining the characteristics and qualities which are essential for a teacher to become successful in his job. They were also asked to give their opinions based on their own experience and thought.
On examining these statements with the help of five experts in conference it was found that some statements which were found to be over-lapping were edited to remove overlap, the statements which were found in negative form were re-written in the positive form, and statements which were ambiguous were removed. Such statements which refer to administration, i.e. sending informations to the office of Educational Inspector, management and such other things were dropped, since they do not come under teaching activities. The remaining accepted statements, all in positive form, were ninety one in number were classified in the following five areas. These areas were in accordance with the areas mentioned in the Opinion Sheet (Appendix No. 1) on which the opinions of the experts were collected.

1. Teaching behaviour of the teacher in the class.
2. Behaviour of the teacher outside the class-room subsidiary to teaching.
3. Duties related to record work.
4. Behaviour of the teacher leading to the initiative work.
5. Behaviour of the teacher regarding his social adjustment, and his general orientation to his profession.
ARRANGING AND NAMING

These ninety one items were used to construct a Rating Scale in which the respondent was asked to rate the ratee (the teacher). The statement items were arranged in a random order so that the rater may not get any kind of indirect suggestion even from the vicinity, or the chronological order of statements. The rater was asked to rate the teacher on this five point scale. The responses of the rater was shown by putting 'V' mark in one of the rating boxes provided for the purpose, showing how far the rater agrees or disagrees with the statement which characterizes the teacher's work. This scale was given the name "Rating Scale for Teacher" (Appendix No. 4 ).

RELIABILITY OF THE SCALE

The scale so constructed to design to serve as a measure of teachers' job success was found highly reliable as indicated by the coefficient of correlation between the rating and re-rating of a sample of 24 teachers. The re-rating was done after about 9 months. Also, the area wise coefficients of correlation were obtained which is shown in the Table No.
Table No. 3: The Coefficients of Correlation Between Rating and Re-rating of a Sample of 24 Teachers.

<table>
<thead>
<tr>
<th>Area of Study</th>
<th>Coefficients of Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.798</td>
</tr>
<tr>
<td>2</td>
<td>0.872</td>
</tr>
<tr>
<td>3</td>
<td>0.970</td>
</tr>
<tr>
<td>4</td>
<td>0.970</td>
</tr>
<tr>
<td>5</td>
<td>0.920</td>
</tr>
<tr>
<td>Total Score of the Scale</td>
<td>0.962</td>
</tr>
</tbody>
</table>

ITEM ANALYSIS

Every item of the scale was tested for its validity. The calculation of 't' for evaluating the difference in the mean response to each item by high group and low group method was found out. 27 per cent (i.e. 55 teachers) of the total sample was selected as a high group and 27 per cent of the total sample was selected as a low group. The value of 't' for each item was found highly significant, and hence all the items were accepted.
THE SAMPLE

The study was restricted to two districts, viz. Kaira and Baroda Districts totalling a number of 55 schools and 218 teachers.

All the secondary schools of Kaira District and Baroda District were primarily screened for the general informations regarding their staff members. The information for graduate teachers and the non-graduate teachers were collected on the Data Sheet (Appendix 2 and 3 respectively).

The sample selected for the purpose of this study is shown in Tables No. 4 and 5.

Table No. 4 : The Sample of Graduate Teachers

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Arts</td>
<td>Science</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trained</td>
<td>61</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Untrained</td>
<td>61</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>122</td>
<td>28</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>160</td>
</tr>
</tbody>
</table>
Table No. 5: The Sample of Non-graduate Teachers

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trained</td>
<td>27</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>Untrained</td>
<td>27</td>
<td>2</td>
<td>29</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>4</td>
<td>58</td>
</tr>
</tbody>
</table>

The clustered sample of 80 trained graduates and 29 trained non-graduate and the corresponding untrained graduate teachers and untrained non-graduate teachers were selected for the purpose of this study.

Thus, the sample consisted of two groups, viz. trained group and untrained group, which were equated with each other for the study of this problem. At the time of matching, difference of one year in age and experience was ignored, also other factors viz., sex, and climatic conditions were controlled by selecting teachers from the same school and of the same sex. The teachers beyond fifty years of age and more than 20 years of experience are matched together, irrespective of age difference or length of experience as they would not gain more above these levels.

The two groups, viz. trained group and the untrained group were rated by the principal and the supervisor of the school independently on five point scale, and the pooled rating
obtained for each teacher in each of the various areas of the teachers' life. The Rating Scale (Appendix No. 4) consisted of 91 items represented five areas. The rater was asked to rate the teacher on each of the items. Since the teachers came from different schools, it was not possible to rate all the teachers by the same raters. Care was taken to see that both members of the matched pair came from the same school so that both were rated by the same pair of raters.

A personal approach was made to the raters to explain them the system of rating. The other objective of this personal approach was that the raters may not consult each other at the time of rating or they may not do careless rating.

Vedprakash (1956) in his historical notes says, "rating scale as a psychological method of assessment was first used by Galton F. in the evaluation of vividness of images. His scale possessed eight steps with a ninth added for very rare cases. Before Galton, however, rating devices had already been used by the British Navy in estimating the velocities of wind on a twelve point scale, 0 representing no wind at all and 12 a hurricane. It was assumed that these 12 steps represented equal sense distances. It is extremely likely that Galton's interest in the use of rating methods in psychology first originated from his associations with meteorology."
Rating scales have subsequently been employed by a large number of investigators in the different psychological fields. In 1895, Mr. Major used the 'Method of Single Stimuli' or as he called it, the method of isolated exposure for the evaluation of the effective value of colours. In 1905, Martine asked for judgements of the comic on a five point scale. Keith, in 1906, used a seven point scale for judgements of agreeableness of odours. Other names that could be mentioned in this context are Hollingworth, Lund, and Conklin.

The use of rating scales in the assessment of human abilities was first made by Karl Pearson who, in 1906, devised a seven point scale for rating intelligence. During the First World War psychologists used this method extensively in estimating the efficiency of officers. This resulted in the invention by Scott of the now known man-to-man rating scale. The critical studies of this scale by Rugg and others have provided valuable evidence on the usefulness and limitations of human traits.

Rating Scales

Human behaviour is a complex phenomenon and presents the greatest difficulty in its understanding and evaluation. A man's total behaviour is the reflection of his underlying mental processes which are the controlling forces in all our actions.
In the present scientific set up of the world, psychological measurement has proved to be an important field. It has been realised by scientists that the study of human being is more worthy of consideration than any other science. It was previously supposed that the characteristics of human beings are beyond the scope of measurement, but now it is no longer considered to be so. Psychological measurement is an important factor that touches us in all our behaviour.

The recent development in the field of psychological measurement is more interested in measuring human behaviour exactly and qualitatively. It has little interest in merely observations and qualitative analysis of human behaviour.

Modern researches have actively developed this field of measurement. Several types of scales, questionnaires, inventories, etc. are prepared to measure various abilities, viz. personality, attitude, achievement, etc. So, we can say that rating scales have become nucleus of measuring human behaviour.

In India, though we use scales, etc. for measuring human abilities, still it is found in infancy, as compared with foreign countries.

THE CHECK-LIST METHOD

Of all the categories of rating scales used for assessing human characteristics and abilities, Check-list type is
supposed to be a proper instrument in studying this problem.

Hurtshorne and May, as quoted by J.P. Guilford (1964) used a check-list as a basis for evaluating children with respect to character. A list of favourable and unfavourable personal qualities was drawn up and 80 trait names were selected. Each rater checked every term in the list that he thought applied to a child. The child's score was the algebraic sum of the total score of each quality. For every favourable trait he used + 1, and for every unfavourable trait he used - 1 as the weight.

There are certain drawbacks of this method of rating. But most of them can be easily remedied. There are no special drawback except central tendency of the rater. This type of tendency is more or less associated with generally all types of ratings.

There are certain advantages in favour of this type of rating scale, viz. simplicity of administration is one of the strongest points in favour of this method. In terms of quantitative judgement they require the minimum discrimination on the part of raters. One might state that for each item a separate response is given by the rater, so he has no difficulty in giving judgement for the item. Scoring is also very easy.
Relatively check-list instrument is a new one and will grow in favour.

For the purpose of our study, this check-list instrument is found very useful and hence it is used.

ADMINISTERING THE RATING SCALE

The Educational Inspector of the District gave a recommendation letter on the principals of all the secondary schools situated under his control, for giving full and correct informations required under this study.

The rating scale was sent to the principals of the secondary schools form where the sample was collected. The principal and the supervisor were requested to give their responses regarding the teacher who is serving under them. A personal approach was made to the raters in this connection. The raters (principals and supervisors) gave their responses on the scale.

RATING OF THE PRINCIPAL

The teacher (ratee) is directly working under the direct control of the principal (the rater). He is the appointing authority. So, the principal remains in contact with every teacher working under him. The principal supervises the teaching of his colleagues when they are engaged in teaching. He keeps record of his supervision work for his own purpose.
(for filling in the service book of the teacher concerned at the end of each year).

As a senior teacher he organizes meetings, seminars, and conferences for improving teaching programme of the school. He is responsible to the Managing Committee, District Educational Inspector, and the guardians of the pupils regarding all the activities going on in the school.

He keeps a log book for every teacher. He supervises the teachers' behaviour when he is engaged in teaching. He generally, rates the teacher once or twice per term. The rating of the principal is very important and he is expected to be impartial in rating.

Generally the following points are included in his rating:

1. Preparation of subject matter.
2. Expressions.
3. Exposition of the subject matter.
5. His general behaviour and attitudes towards his pupils.

In small schools where supervisors are not appointed by the school authorities, the principal supervises the work of each teacher more frequently.
RATING OF THE SUPERVISOR

The supervisor has a very important position in the administration of the school and remains the nucleus of the whole machinery of the supervision programme. He is specially appointed by the school authorities to help the principal in the supervision programme.

The supervisor is a long experienced successful teacher having good training. Because he has to supervise and rate all the teachers working under him, he should be a competent teacher with sound knowledge of subject matter and pedagogy.

The supervisor keeps the log book for every teacher. He observes the teaching behaviour of the teacher while he is busy with his teaching. Generally he supervises every teacher once or twice a month. During the course of supervision, the supervisor rates him in his log book. At the end of the working hour, the supervisor and teacher concerned discuss the points noted. Thus we can say that the supervisor is an ideal bridge between the school authorities and the teachers.

Generally he rates the teacher under different heads which carry nearly the same aspects as those of the principals.
SCHEME OF RATING
FOR THIS STUDY

In the scheme of studying this problem, the rating of the supervisor is supplemented with the rating of the principal. In this study average score of the rating of the principal and that of the supervisor is taken for the study of that area. The average of the score is termed as 'score'.

THE SCORING

The rated scales were scored area-wise and then aggregate score was computed.

The area-wise scores and the aggregate scores of trained teachers were compared with those of the paired untrained teachers as follows:

1. The scores of trained graduate teachers were compared with the scores of paired untrained graduate teachers for all the five areas, as well as for aggregate scores. (Table Nos. 7, 9, 11, 13, 15 and 6)

2. The scores of trained non-graduate teachers were compared with the scores of paired untrained non-graduate teachers for all the five areas as well as for aggregate scores. (Table Nos. 7, 9, 11, 13, 15 and 6)

3. The scores of all trained teachers (graduate and non-graduate) were compared with the scores of paired
untrained teachers for all the different areas as well as for aggregate scores. (Table Nos. 9, 11, 13, 15 and 6)

Testing the differences between the trained and untrained groups

For studying this problem, the 't' test by the difference method was computed. The values of 't' ratios and the values of difference between the mean were studied for the results and interpretations.

SOME ERRORS ASSOCIATED WITH
THE RATING SCALE METHODS

Certain common errors, which are always found associated with rating scale methods are discussed below. They should be remedied for better and correct results.

1. Error of Leniency or Generosity

This is the general tendency of most of the raters, to rate above average to those ratee who they know. The raters generally rates higher than what actually the ratee deserve.

2. Error of Prejudice

Some times raters under-estimate the ratee, and as a result of which the raters under-rate the ratee consciously or unconsciously prejudice. It is some what easy to get rid of our conscious prejudice, but a bit difficult to get rid of unconscious prejudice. If genuine effort is made with the aim to remove conscious prejudice, it can be done so; but it is difficult to remove unconscious prejudices of the raters.
3. Error of Central Tendency

Many raters fall victim in giving their opinions regarding the ratee, with reference to this error. Raters are inclined to hesitate to give extreme scores and hence they give their responses in the direction of the mean of the total group.

This type of error in the rating generally happens when ratee is not known to the raters.

4. The Halo Effect

This type of error happens when the rater is highly impressed of some traits of the ratee. For example, if a rater is impressed by a ratee for his honesty, then the rater would rate him more intelligent and more industrious.

It is generally advised that do not rate a single subject on some or all the variables at the same time.

But this is very difficult to put in practice. So, we can say that traits of the same area should not come in sequence, i.e. some arrangement should be done to arrange the items of different areas one after the other.

5. A Logical Error in Rating

Some raters carry association between some traits in their minds. Hence, at the time of rating, he cannot rate
judiciously. e.g. if a rater carries an association between honesty and regularity, then the rater will rate a 'regular man' as 'honest man' also.

To avoid this error, the rater should think separately for each item.

In our study all these errors are remedied by -
1. arranging items in random order,
2. making the raters conscious about the fact that each item is different from other items. So, he should think for each item separately,
3. requesting them not to be very lenient or strict in rating, and
4. requesting the raters to give their opinions judiciously as the rating is useful only for the purpose of research and no other use was to be made.

DIFFICULTIES IN THIS STUDY

In studying this problem, some general difficulties were found.

1. Difficulty of Preparing Pairs of Teachers

In spite of many teachers on the staff, it was found difficult to get even small number of pairs.
As trained teachers would not be selecting rural areas for their services, and less number of untrained teachers are employed in urban areas.

2. Mobility of Teachers

There is a high degree of mobility in this profession; and hence the selected teacher under study may take a transfer.

To overcome this difficulty, a continuous contact was maintained till the rating was over.

3. Lenient Rating or Strict Rating

Some principals and supervisors would like to rate their staff members leniently to show that they have a very good staff.

Against this tendency, some raters would rate strictly to show his own efficiency of work.

This was remedied by requesting them to rate judiciously, as this rating is to be used for research work only.

Full instructions were given on the Rating Scale to minimize these general errors.

It is supposed that the matured raters would have rated the ratee judiciously.
The results of the rating are discussed in the subsequent chapters.