

## CHAPTER III

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### 3.1 Introduction

This chapter includes the procedure followed by the researcher in the selection of the sample for the present study. It also contains a list and description of all the tools used in the collection of data. The design of the study consists research plan for carrying out the study and the procedure contains all the research processes from sampling to the data collection.

### 3.2 The Sample

The Managerial Effectiveness Scale (MES) was administered on the principals of fifty four Gujarat State Secondary Board Schools in Baroda city which were selected randomly from six regions in Baroda and four Central Board Schools. So a total of fifty seven principals were selected. The 30% teachers from each of these fifty seven schools were given the same scale to get their perception about their principals' effectiveness.

As the main purpose of the study was to find out the relationship amongst the variables - a sample of thirty principals were chosen for the final phase of the

study out of a total of fifty four principals as two schools did not respond to the scale and the principal of one school suddenly got transferred after the first phase of data collection. These thirty principals were screened on the basis of their score on the MES. The obtained scores were arranged from the highest to the lowest and the top 15 and bottom 15 principals were selected for the final study. Those who were falling in the middle of the continuum were eliminated in order to get a distinct picture of the relationship existing amongst the variables.

### 3.3 The Instruments

The following four instruments were used for the collection of data :

- a) Managerial Effectiveness Scale (MES) prepared by the investigator to measure Managerial Effectiveness of the educational managers.
- b) Raven's Progressive Matrices to measure Intelligence.
- c) Murray's Thematic Apperception Test (TAT) for the measurement of Achievement Motivation.
- d) Pareek's Organizational Role-Stress (ORS) Scale to measure Role stress.

All these four tools are reproduced in Appendix I, II, III and IV.

### 3.3.1 Preparation and Description of Managerial Effectiveness Scale (MES)

The main focus of the study was to assess the managerial effectiveness of the educational managers, that is, the school principals. Effectiveness is the achievement of some purpose, objective or task through the performance of the process of management and the execution of the work. At the same time, it is also important the way in which the manager is achieving the results as it influences, to a large extent, the effectiveness in the long run. Along with it, there are a number of other factors that are affecting the managerial effectiveness. It is composed of a large number of factors, the assessment of each of which gives the extent to which a manager is effective in his performance and the composite score of all these components can serve as an index of a manager's effectiveness. But the difficulty lies in the ready assessment of all these variables, this is more so in education as the goals, process and the product are intangible and not readily measurable.

Keeping this view in the background, the investigator, in constructing the present tool, tried to sieve some major components which were indispensable in performing the managerial work effectively.

Managerial effectiveness, in the present study, had been defined as the level of functioning at which progress towards organizational goal is facilitated to a high degree. In order to determine "the level of functioning" the investigator took into consideration three dimensions, the presence of which seemed to logically contribute to the attainment of organizational goals.

The scale on managerial effectiveness was a rating scale which had three dimensions, namely, (A) management processes, (B) some personality attributes of an effective manager, and (C) some knowledge areas related to education. Section (A) has dealt with management process area which were sub divided into a number of task areas to which a manager in any organization is involved in fulfilling his managerial activities. Section (B) deals with the manager's few personality attributes that seem to be inevitable in becoming an effective manager. As the manager gets the work done by

other people, his personality has a lot of bearing on his interaction with others. Thus, even if a manager strictly follows the process aspect of management, he will not be successful if he fails to manifest the desired pattern of behaviour. At the end, some knowledge areas had been enlisted in section (C). The logic behind was that an effective educational manager is expected to demonstrate appropriate and up-to-date knowledge related to the field of education, namely, few psychological constructs (motivation, group dynamics etc.), current societal conditions, different policies framed by the state and central government curricular and co-curricular activities and so on. In order to manage an educational institution effectively, a manager must bring into play all these areas of knowledge to cope with each critical situation. The detail of the tool is given in the following discussion. \*

The first dimension in the tool was the management processes. Management is considered as a process as it is a systematic way of doing things towards achieving some goals. All managers engage in certain interrelated activities which can be categorized as - planning, organizing, staffing, directing, co-ordinating, controlling and evaluating. Each of these activities

were split into several key tasks and expressed in the form of statements in a 4 - point scale ranging from 1 to 4, indicating how true a particular statement is for a manager. This part (A) consists 44 statements in total, the cumulative score of which expresses the level of functioning of a manager in the management process.

The second dimension (B) in the scale was some personality attributes of a manager. Managerial effectiveness results from a combination of personal attributes of the manager. The performance of the managerial activities takes a different colour in the presence of these personality attributes. Fifteen such personality attributes had been chosen in the present scale which were arranged in 15 bipolar continua. Each continuum ranges from +2 to -2. +2 indicates the maximum level of possession of a particular attribute whereas, -2 indicates the maximum level of possession of the opposite dimension of the same attribute. All these attributes were assumed to have a direct impact on the effective running of the institution.

The third part (C) of the scale consists a number of knowledge areas related to education the presence of

which seemed to enhance the effectiveness of the manager. There were 18 such essential knowledge areas each of which were given against a four point rating scale ranging from 4 to 1. In the scale given to the teachers of the corresponding school one additional column was added to the scale indicating "Don't Know" in order to avoid bluffing which could be used where he/she does not really know the extent of his/her principal's knowledge regarding a particular area.

After splitting each dimension into a number of items the scale was given to a panel of experts for item validation.

On the basis of the experts' view the investigator modified and added a number of items. In the first part (A) there were earlier 34 items, 10 items were added in the final tool. In part (C) the last 3 items were added after taking the opinion of the experts.

Thus, the final tool consisted 44, 15 and 18 items in parts A, B and C respectively. The highest score in the scale was 278 and the lowest was 32. Hence, the tool was prepared for final administration.

### 3.3.2 Description of Raven's Progressive Matrices

This test was developed in England. It is a widely used test.

There are five sets in the test. It is a test of a person's capacity at the time of test to apprehend meaningless figures presented for his observation, see the relationships between them, conceive the nature of the figure completing each system of relations presented, and, by so doing, develop a systematic method of reasoning.

The scale consists of 60 problems divided into five sets of 12. In each set the first problem is as nearly as possible self-evident. The problems which follow become progressively more difficult. The order of the tests provides the standard training in the method of working. The five sets provide five opportunities for grasping the method and five progressive assessments of a persons' capacity for intellectual activity. To ensure sustained interest and freedom from fatigue, the figures in each problem are boldly presented, accurately drawn as far as possible and pleasing to look at. The scale is intended to cover

the whole range of intellectual developments from the time one is able to grasp the idea of finding a missing piece to complete a pattern, and to be sufficiently long to assess a person's maximum capacity to form comparisons and reason by analogy without being unduly exhausting or unwidely.

The scores obtained by adults tend to cluster in the upper half of the scale, but there are enough difficult problems to differentiate satisfactorily between them.

Everyone, whatever his age, is given exactly the same series of problems in the same order and is asked to work at his own speed, without interruption, from the beginning to the end of the scale. As the order of the problem provides the standard training in the method of working, the scale can be given either as an individual, a self-administered or as a group test. A person's total score provides an index of his intellectual capacity, whatever his nationality or education.

It is often useful to describe the scale as a test of observation and clear thinking. The scale has a retest reliability varying, with age, from .83 to .93.

Young children, mentally defective persons and very old people are not expected to solve more than the problems in sets A and B of scale and the easier problems of sets C and D, where reasoning by analogy is not essential. After they can no longer solve the problems, they may still choose the correct answer for other reasons. For normal adults, sets A and B provide little more than training in the method of working.

Sixty problems in the instrument are arranged in five sets of overlapping difficulty. The scale is intended to span the whole range of intellectual development.

### 3.3.3 Description of Udai Pareek's Organizational Role-Stress (ORS) Scale

This scale is developed by Udai Pareek in 1982. The various role stresses relevant to organizational life have taken into consideration for the preparation of the scale, namely, self-role distance (SRD), inter-role distance (IRD), role stagnation (RS), role ambiguity (RA), role overload (RO), role isolation (RI), role erosion (RE), and role inadequacy (RIn), the descriptions of each are given below.

Self-role distance (SRD) - This is the conflict between the self concept and the expectations from the role as perceived by the role occupant. If a person occupies a role which he may subsequently find conflicting with his self-concept, he feels the stress.

Inter-role Distance (IRD) - An individual occupies more than one role. There may be conflicts between two roles he occupies. Such inter-role conflicts are quite frequent in modern society when the individual is increasingly occupying multiple roles in various organizations and groups.

Role stagnation (RS) - As the individual grows physically, he also grows in the role he occupies in an organization. With the advancement of the individual, his role changes and with this change in role, the need for his taking his new role becomes crucial. This becomes an acute problem especially when an individual has occupied a role for a long time, and he enters another role in which he may feel less secure. This demand of the new role is for the individual to outgrow his previous role and occupy the new role effectively. This produces some stress in the individual.

Role Ambiguity (RA) - When the individual is not clear about the various expectations people have from his role, he faces the conflict which may be called role ambiguity. Role ambiguity may be due to lack of information available to the role occupant, or due to lack of understanding of the cases available to him.

Role Overload (RO) - When the role occupant feels that there are too many expectations from the significant roles in his role set, he experiences 'role overload'. This term has been popularised by Kahn, et al. (1964).

Role Isolation (RI) - In a role set, the role occupant may feel that certain roles are psychologically near to him, while some other roles are at a distance. The main criterion of role - role distance is frequency and ease of interaction. When linkages are strong, the role - role distance will be low. The gap between the desired and existing linkages will indicate the amount of distance between the two roles.

Role Erosion (RE) - A role occupant may feel that some functions which he would like to perform are being performed by some other role. The stress felt may be

called 'role erosion'. Role erosion is the subjective feeling of an individual that some important role expectations he has from his role do not match with the expectations other roles have for him. Role erosion is likely to be experienced in an organization which is redefining its role and creating new roles.

Role Inadequacy - Role Inadequacy refers to two types of feelings : (a) that the role occupant does not have adequate resources to perform the role effectively which is called Resource Inadequacy (RIn), and (b) that he is not fully equipped (lacks internal resources) for effective performance of the role known as Personal Inadequacy (PI).

ORS Scale is a 5-point scale, indicating how true a particular statement is for the role. Thus the scores for each role stress range from a minimum of 5 to a maximum of 25. Originally, the instrument had 40 items (5 for each of the role stresses). Later, in the light of findings of factor analysis some items were included and it came to total 50 items. The score of each role stress may range from 0 to 20 and the total organizational role stress score may range from 0 to 200. The answer sheet is separate to facilitate quick

calculation of the role stress scores. The ratings of the respondents can be added row-wise to give the scores on the 10 role stress dimensions.

The scale has acceptable reliability and validity. It can be used to investigate the nature and dynamics of role stress in various organisations.

#### 3.3.4 Description of Murray's Thematic Apperception Test (TAT)

Four picture cards from Murray's TAT (1956) were used. The picture cards contain the following visual ones :

1. Boy with vague operation scene in background.
2. Boy with elderly man.
3. Two men working on a printing machine.
4. A man sitting at a drawing board.

The respondent is shown each picture for 20 seconds. He is then required to tell a story on the picture he has seen. His story is guided by four questions which are:

1. What is happening? Who are the persons?
2. What has led up to this situation ? That is, what has happened in the past ?
3. What is being thought ? What is wanted ? By whom ?
4. What will happen ? What will be done ?

### 3.3.5 Scoring on need for Achievement (n-Ach)

The stories are each scored +1 Achievement imagery (AI). Stories which fulfil at least one of the following criteria can be scored for (AI):

- (1) Competition with a standard of excellence.
- (2) Unique accomplishment.
- (3) Long-term involvement.
- (4) Competition with self and/or others.

Stories which contain no reference to a goal or to an achievement are scored - 1 for unrelated imagery (U1), and stories which have mention of doubtful imagery or task imagery (T1) are scored as zero.

There are ten other sub - categories to be scored and these are assessed only when the story has first been scored for achievement imagery.

The ten sub categories are as follows :

(1)	Stated need for Achievement	(N)	+1
(2)	Instrumental Activity	(I)	+1
(3)	Goal Anticipatory State Positive	(GA+)	+1
(4)	Goal Anticipatory State Negative	(GA-)	+1
(5)	Personal Blocks	(BP)	+1
(6)	World Blocks	(BW)	+1
(7)	Nurturant Press	(NuP)	+1
(8)	Affective States Positive	(G+)	+1
(9)	Affective States Negative	(G-)	+1
(10)	Achievement Thema	(ACH.TH)	+1

All the above sub-categories are scored just once in each story. Thus, with four picture - story scores, the minimum possible n-Ach. score will be -4 while the maximum possible n-Ach score will be +44.

### 3.4 The Design of the Study

The present study was taken up to test four hypotheses mentioned earlier. Since the objectives of the study were to find out the relationships among the variables, the investigator decided to collect the relevant data through appropriate data gathering devices, namely, MES, Ravan's Progressive Matrices, TAT

and ORS Scale. The study was a correlational survey type of research where specific data was to be collected and analysed to find out any significant relationship among the variables like managerial effectiveness, intelligence, achievement motivation and role stress. In order to go indepth the researcher had made use of semi structured interview schedule on the educational managers.

As it was possible for the researcher to have hunches about the relationships among the variables, the study incorporates four hypotheses in the null form for statistical treatment.

### 3.5 The Procedure

This part of the method contains the detail description of the sequence of the research processes starting from the selection of the sample upto the collection of data.

#### 3.5.1 Procedure for Selection of the Sample

The sample was selected from the secondary and higher secondary schools of Baroda. The investigator

collected a list of the schools from the State Board of Secondary Education office where a total of 105 schools under the state board of Gujarat were distributed among the six regions decided by the S.S.E. board office. The six regions are namely, Sayajigunj, Raopura, Karelibaug, Makarpura, Alkapuri and Mandvi. The schools are distributed under the different regions as follows:

	Names of the regions	No. of schools
1.	Syajigunj	16
2.	Raopura	23
3.	Karelibaug	11
4.	Makarpura	12
5.	Alkapuri	18
6.	Mandvi	25
		-----
		105

Out of these 105 schools, 50% of the schools were decided to take at random. There are 5 schools in Baroda which are under the Central Board of Secondary Education (C.B.S.E.) all of which were decided to take as the sample. Before taking the sample, a list of the principals, who have been with the school for at least last two years, was made. The minimum time period decided was two years as the investigator thought that this period of two years was sufficient to show one's

effectiveness in an organization. While making the list it was found that the principal in one of the schools under the C.B.S.E. had joined the school only two months ago. According to the criterion mentioned earlier the researcher had to cancel that school from the population. From the 105 schools of the State Board of Gujarat, 50% of the schools were selected by random sampling.

Thus, a total of 57 schools were selected for the first phase of data collection.

As there is a direct link between the teachers and the principal and it is the teachers who realise the activities of their manager more than the others, the same tool for assessing managerial effectiveness was also given to the teachers of each of the schools in order to get their perception about their managers' activities. It also served as a further check on the principals' own perception about themselves for this purpose the investigator first collected the list of the teachers from each school who have been with the present principal for at least two years because it is a reasonable span of time to realise one's effectiveness. Out of these lists, 30% of the teachers from each school

were chosen to give their perception about their principal.

The Managerial Effectiveness Scale was given to the selected 57 principals. While doing so, at the same time, the list of the teachers who had been with the principal for more than two years, was collected from each principal and accordingly 30% of the total number of teachers from the list of each school were selected at random and were distributed the same scale.

The researcher personally went to the schools to collect the given scale. Most of the school principals and the teachers returned the scale except three schools. In one school the principal suddenly got transferred and the other two principals refused to return the scale.

Thus, the total sample came down to 54 schools which were left for further study.

The Managerial Effectiveness Scale was collected from all the 54 schools. A table was made with the scores given by the principals to themselves and the teachers' assessment of the principals in the

corresponding schools. The mean score of the teachers' assessment was calculated for each school.

On the basis of the teachers' perception the scores were arranged from the highest to the lowest. For the final phase of data collection, top 15 and bottom 15 schools were selected.

Hence, a final sample of 30 was chosen for the indepth study to determine the relationship among the variables.

### 3.5.2 Procedure for the Administration of the Tools

After screening 30 principals according to the procedure mentioned, the other three tools were administered on the selected groups in the following ways:

#### 3.5.2.1 Procedure for the Administration of Raven's Progressive Matrices

Particulars of the principal to be tested were filled in one of the record form. The investigator opened the book at the first illustration, A.1, and said:

"Look at this (pointing to the upper figure). It is a pattern with bit taken out. Each of these bits below (pointing to each in turn) is the right shape to fit the space but they do not all complete the pattern".

She explained why numbers 1, 2 and 3 were wrong and why number 6 was nearly right. She then said "Point to the piece which is quite right". Where the principal could not point to the right piece the researcher continued her explanation until the nature of the problem to be solved was clearly grasped.

The investigator then explained that on every page there was a pattern with part left out, and said "All you have to do is to point each time to the bit which is the right one to complete the pattern". As the researcher turned to illustration A.2, she said, "They are simple at the beginning and get harder as you go in. If you pay attention to the way the easy ones go, you will find the later ones less difficult, just point to the piece which completes the pattern. Now carry on at your own pace. See how many you can get right. You can have as much time as you like. There is no need to hurry. Be careful, remember each time only one bit is quite right".

The principal giving the test recorded the number of the piece pointed to in each test in the appropriate place on the record form and the pages are turned over one at a time.

Sometimes, when it was needed, the researcher guided the persons' attention to each problem, apart from this, no assistance was given to them.

#### 3.5.2.2 Procedure for the Administration of TAT

Murray's Thematic Apperception Test comprised four pictures. Four blank sheets were given to a respondent and then the verbal instructions delivered which was as follows :

"I'm going to show you four pictures one at a time. You will have about fifteen seconds to carefully look at a picture that is shown to you and then you will be required to write any story which comes to your mind that is based upon what you saw in the picture. You may write your story according to four questions which have been written on a card that I shall shortly give you. Are you ready? Here is the first picture".

After about fifteen seconds of displaying the picture, it was taken away and the card containing the four questions was given to the subject. The questions on the card were as follows:

1. What is happening ? Who are the persons ?
2. What has led up to this situation ? That is, what has happened in the past ?
3. What is being thought ? What is wanted ? By whom ?
4. What will happen ? What will be done ?

All this stage, after reading the four questions the subject began to write his answer on the blank paper provided to him.

As the subject finished his story - writing for the first picture, the researcher showed him the next one and this way stories on four pictures were collected. The investigator allowed them to write the stories in their mother tongue.

#### 3.5.2.3 Procedure for the Administration of Organizational Role Stress (ORS) Scale

The principals are provided the booklets and the

answer sheets. The respondent was instructed to read each item and give their responses in the answer sheet. The respondent indicated his response by writing 0,1,2, 3 or 4 against the serial number of each item as given in the booklet. The items were answered in serial order.

All data collected by these four tools are given in Table-1 and Table-2.

TABLE - 1

SCORES OBTAINED BY THE TOP FIFTEEN SCHOOL PRINCIPALS  
ON THE FOUR VARIABLES

Sl. No.	Managerial Effectiveness	Intelligence	Achievement Motivation	Role Stress
1.	250.43	47	10	37
2.	248	42	-2	49
3.	241.5	49	2	9
4.	240.5	45	0	89
5.	237	51	7	77
6.	227.67	50	5	68
7.	227.5	40	3	60
8.	219	31	0	85
9.	218.67	40	7	69
10.	218	57	4	61
11.	216	55	16	56
12.	216.33	43	0	66
13.	213.67	39	-1	88
14.	213	39	18	35
15.	211	45	4	107

TABLE - 2

SCORES OBTAINED BY THE BOTTOM 15 SCHOOL PRINCIPALS  
ON THE FOUR VARIABLES

Sl. No.	Managerial Effectiveness	Intelligence	Achievement Motivation	Role Stress
1.	75	42	0	65
2.	131.6	27	-1	93
3.	145	44	-1	113
4.	151.2	36	4	67
5.	152.14	39	2	79
6.	156.5	41	-2	56
7.	161.3	30	10	40
8.	164.6	17	14	70
9.	166.33	25	0	81
10.	175.2	41	3	81
11.	176	32	4	42
12.	177	25	2	111
13.	180	33	6	17
14.	182.5	44	-1	118
15.	185	30	0	83

### 3.6 Procedure for Statistical Analysis of Data

After administration of all the three instruments in the second phase of data collection on 30 principals - top 15 and bottom 15 - three sets of data were found. The data collected were on interval scale.

In order to test the first three null hypotheses product moment correlation technique was used.

The first three null hypotheses were -

1. There is no significant relationship between managerial effectiveness and intelligence of the educational managers.
2. There is no significant relationship between managerial effectiveness and achievement motivation of the educational managers.
3. No significant relationship exists between managerial effectiveness and role stress of the educational managers.

The fourth null hypothesis was :

4. There is no significant contribution of intelligence, achievement motivation and role stress together in predicting managerial effectiveness of the educational managers.

It was tested by multiple regression correlation technique.

All data collected for the purpose of the present study were given to the computer for the above treatments.