C H A P T E R III

STUDY PLAN AND METHODS

Aims and Objectives

Every organization has elaborate systems for generating, storing, utilizing and appraising material resources. Human resources are more vital. Traditionally they are neglected. In this study it was aimed to develop a system to understand the strength of human resources in an organization. It was attempted to examine the efficiency of techniques in determining suitability of executives for high level jobs. Employees are endowed with wide variety of talents and potentialities. Better utilization of human resources are possible by providing them opportunities and assigning them jobs as per their capabilities. It is, therefore, imperative to assess potentialities of employees so that their suitability for advancement can be decided and right man can be placed on right job. Thus the broad objective of this study was to identify attributes, which could be called potentialities of executives in a fair, objective and systematic manner so that executive selection strategy could improve by matching these critical attributes with the attributes of future promotion aspirants for executive jobs.

The general purposes of the study were to probe into the personality profile of executives in a large banking

organization; to study and identify their strong behavioural traits, temperaments, motivational and other mental abilities; to study their job success and to identify the personality correlates of job success. The specific purpose of this investigation was to explore the following :

(a) What are the personality characteristics of successful (high performer) executive in a large nationalized bank?

(b) Which of the mental abilities, personality traits, temperaments and interests are significantly associated with executive's high performance ?

(c) What is the extent of influence of each of the personality attributes under consideration on job success ?

(d) What is the combined effect of these characteristics and what is the extent of their predictive efficiency ?

(e) Are there differences between different categories of executives in terms of these predictors of potentialities ?

(f) What are the common potential attributes for all executives ?

To meet the above objectives the hypotheses described below were formulated The hypotheses for each Grade were formulated keeping in view their respective duties and responsibilities supposed to have been performed by them. For this purpose a

comprehensive dimensions of jobs of executives understudy were identified and brief descriptions of roles were made, which are given at appendices A to F.

Hypotheses

In a general way, we can say that there would be certain identifiable potentialities attributes associated with high performance of executives. These potentialities required for various Grades/Scales of executives would be significantly different among themselves.

01. An executive in Scale II in the bank occupies the position of Branch Manager or Accountant in a branch, or a Manager in an administrative office.
    He organizes and controls the work of the subordinates in his unit. He is supposed to take quick and effective action to achieve good business in a competitive market. It is,therefore, hypothesized that judgement ability,decision making, risk taking ability, creativity and innovativeness would be significant predictors of potentialities.

02. An executive in Scale II directly faces operational problems. Some of them are attributable to people, some to systems and procedures. He makes critical analysis. He tries to locate causal factors and takes remedial measures. He sees that the decisions taken by him are implementable, less risky and acceptable to all. As he is answerable to higher

authorities, auditors, etc., he is careful to do right things. Conceptual ability and practical thinking would, therefore, be significantly related to their performance.

03. A Scale II executive works as head of small operating unit. He manages responsibility huge public money. His actions are subjected to various statutory and non-statutory scrutiny and inspection. He is supposed to play the role of a helper to all sections of people. He himself conducts periodic review of the progress of work in various sections and exercises checks and balances. It was, therefore, hypothesized that his high performance would be significantly dependent on his being tough-minded, objective and dependable.

04. A Scale II executive sets goals and targets for his department; prepares manpower, finance and material budget, plans strategies and monitors progress. He is always supposed to achieve target and sometimes more than the target (inspite of various constraints). Therefore, traits like achievement motivation, critical thinking, initiative and resourcefulness were hypothesized to be the significant contributors of his performance.

05. A Scale II executive carries his reponsibilities by developing a competent team. He himself provides an inspiring leadership He arranges for resources. He unites opposing forces, groups and individuals into a smooth working

team. He tries to maintain good contacts with local leaders, politicians and union representatives He markets bank`s schemes. He rewards and punishes staff. He is supposed to try for social upliftment of people as per government directives. His significant attributes contributing toward high performance would, therefore, be relational skills, stress tolerance, emotional stability, shrewdness and self-assuredness.

06. An executive in Scale II receives various instructions and am endments to statutes and directives. He studies them for implementation and disseminates them among subordinates. He educates staff and customers. In this perspective, it was hypothesized that knowledge and ability and readiness to learn would be his significant attributes.

07 An executive in Scale III works as a Senior Manager either in a big branch or a big administrative office. He is the backbone of the management. He studies and interprets bank`s policy and is supposed to implement them honestly and sincerely. Most of the time he works at far off places, without having close touch with the higher authorities. He exercises huge financial power independently and while taking decisions, he cannot sacrifice bank`s interests. It was, therefore, hypothesized that for Scale III executives the personality traits like dependability, decision making, judgements. practical temperament and risk taking ability

would be significantly associated with their high performance

08. A Scale III executive computes data on an on-going basis, analyses trends and prepares long range plans and annual budget. He fulfills the expectations of the management by taking high responsibilities and achieves business targets. He directs his business activities toward the national political philosophy and socio-economic goals. It was, therefore, assumed that conceptual ability, achievement motivation, critical thinking, initiative, self-assuredness and resourcefulness would be his significant predictors of potentialities.

09 A Scale III executive aggressively markets bank's schemes. He establishes long term relations with customers. He educates them. He interacts with various government, agencies and political authorities while performing his primary roles. He receives demands from various interest-groups. While satisfying the needs of all these people he has to maintain a balance between all classes and keep himself free from pressure. It was,therefore, hypothesized that the attributes like relational skills, emotional stability, tough-mindedness, stress tolerance, objectivity, shrewdness and creativity and innovativeness would be the significant contributors of his high performance.

10. An executive in Scale III examines the technical feasibility of proposals. He provides professional guidance to subordinates. He develops junior officers. He disseminates all new directives and ensures their implementation. Ability and readiness to learn and acquisition of knowledge would be significant determiners of his potentialities.

11. An executive in Scale IV works as a Chief Manager either in an exceptionally large branch or in an administrative office or as a Regional Manager of a region. He plans and organizes resources and provides direction for producing optimum output. He projects short term and long term targets for all units under his control. He establishes mechanism for implementation of targets. He monitors and reviews performance. He arranges for rectification of irregularities. Therefore, it was assumed that dependability, conceptual ability, practical temperament, risk taking ability, creativity and innovativeness and resourcefulness would be his significant attributes.

12. An executive in Scale IV develops a team of experts in his region/unit. He develops human resources. He participaces in the proceedings of committees for district development,etc. He educates staff for implementing government's poverty alleviation programme. He maintains a harmonious industrial relations. He administers controls and supervises the units under his charge. Therefore, it was assumed that judgement,

decision making, shrewdness, relational skills, stress tolerance, tough-mindeness self-assuredness and emotional stability would be the significant predictors of their potentialities.

13. A Scale IV executive sanctions big business proposals. He approves capital expenses. He checks and plugs any loophole in operation. He scans the economic environment in the area and explores business opportunities. He introduces new schemes for growth of the organization. He improves customer services and marketing strategies. He creates a climate of efficiency. He motivates managers for better results. He manages discipline. Therefore, it was hypothesized that achievement motivation, critical thinking, initiative, knowledge, ability and readiness to learn and objectivity would have significant influence on his performance.

Preliminary Survey

Personality attributes, abilities and traits covered under previous studies were numerous. Therefore, an objective process of attributes identification was followed. A preliminary survey was conducted to identify the perceived significant attributes considered as potentialities for success at higher levels by executives in banks. A list of popularly used adjectives, traits and personality attributes was made. The list consisted of 35

adjectives and qualities that could possibly be considered as potentialities of successful managers. 42 respondents were drawn at random from the universe from which the final sample was to be drawn. The purpose of the survey was explained to them and they were requested to identify a tentative list of attributes which could be included in a full-fledged study. The schedule consisted of 2 questions as follows :

1. We believe that successful Managers and Executives in banks should have certain qualities and potentialities. In your opinion, what are these qualities or potentialities? Please list them.

2. Kindly suggest your preferences for only 5 qualities form the above. Please rank these 5 factors by marking I, II,III, IV and V indicating I for the most important and going downward in order of diminishing importance up to the Vth rank for the least important. The schedule (used) is enclosed and marked as Appendix - G.

All the respondents were personally contacted at their workplace during the officer hours. They were requested to think of some of their successful colleagues, superiors and other employees in the managerial cadres in the bank and to conceptualize the strong qualities that contributed towards their success. To stimulate their thinking the list of words and phrases characterizing qualities of executives was provided to

them and they were also requested to add further factors that they might consider important. Wherever required, the general meanings of the qualities were explained to the respondents. Only 38 respondents filled the questionnaire completely. Qualities which were preferred by atleast 50% of the respondents were retained. These qualities are listed below :

1. Emotional stability
2. Self assuredness
3. Achievement motivation
4. Initiative
5. Shrewdness
6. Critical thinking
7. Conceptual ability
8. Objectivity
9. Judgement
10. Resourcefulness
11. Tough-mindedness
12. Practical temperament.

Similarly, qualities which were preferred according to their rank orders were compiled. The rank ordered qualities were correlated with the previous list of qualities and correlation between these two was worked out. The obtained correlation was 0.70. Therefore, these 12 variables were carried for further study.

The respondents were busy executives. They were located at different towns and metropolitan cities spread all over India. They had to be contacted during office hours only. Time was a great constraint. Therefore, psychological testing procedures were simplified. The methods of response giving were also

suitably modified. Items of standard tests were screened to tone them down to the level of the respondents. However, wherever, such modification (very minor) were made suitable psychometric precautions were taken to ascertain their reliability, etc. for the present sample. Details have been given in the description of individual tests later in this chapter

The tests selected were of different nature. Each test was measuring one or a few psychological factors. Each was intended to assess something that no other test in the group of tests used in the study could measure.

Some of the respondents were not accessible for personal contact. Most of them were under heavy job pressures and it was, therefore, decided that the respondents could fill the questionnaires at their own convenient time. The tests were so selected that most of the items or the tests could be attempted by the respondents themselves. Suitable care was also taken to identify and administer only simpler tests out of the available ones.

Sample

All officers were distributed under 7 scales in the Bank under study, as follows :

Junior Management Grade	- Scale-I	- Officers, Accountants, Managers in small branches.
Middle Management Grade	- Scale-II	- Managers, Joint Managers in big branches.
	Scale-III	- Senior Managers.
Senior Management Grade	- Scale-IV	- Regional Managers and Chief Managers.
	Scale-V	- Asstt.General Managers.
Top Management Grade	- Scale-VI	- Deputy General Managers
	Scale-VII	- General Managers.

In order to make the study manageable and also in view of the present requirement of the bank where the study was undertaken,the study was limited to Managers in the II,III and IV Scales only.

These were the familiar categories in the organization and any further sub-categorisation would have given only smaller sample size in each job which would not have been very meaningful in terms of roles performed by these employees. Also, since promotions in the Bank were made from scale to scale and not as per designations, it was more sensible to divide the sample in terms of Scales and not in terms of designations.

Table 1 : The size and nature of the sample.

Total Scale - II Officers as per criteria	No.of Scale - II Officers covered		Total Scale - III Officers as per criteria	No.of Scale - III Officers covered		Total Scale - IV Officers as per criteria	No.of Scale - IV Officers covered		Total Officers as per criteria	Total Officers covered in Sample	
	No.	%		No.	%		No.	%		No.	%
1	2	3	4	5	6	7	8	9	10	11	12
703	66	9.4	396	38	9.4	152	34	22.4	1251	138	11.0

The size and the nature of the sample are given in Tables 1 to 5.

Table 2 :

Frequency distribution of the subjetcs according to their age groups

Age	Frequency	Percentage
25 - 30.5	3	2.16
30.5 - 35.5	6	4.33
35.5 - 40.5	27	19.57
40.5 - 45.5	32	23.18
45.5 - 50.5	36	26.09
50.5 - 55.5	22	15.95
55.5 - 60	12	8.69
Total	138	100.00

Mean Age : 45.70
SD : 6.90

The table shows that though the subjects belonged to several age groups, the majority (49.27%) of them belonged to the age range of 40.5 - 50.5 years.

Table 3 :

Frequency distribution of the subjetcs according to their experience (in years) in the Bank.

Experience in Bank (in years)	Frequency	Percentage
3.0 - 5.5	3	2.16
5.5 - 10.5	5	3.61
10.5 - 15.5	9	6.52
15.5 - 20.5	40	28.98
20.5 - 25.5	35	25.36
25.5 - 30.5	26	18.83
30.5 - 35.5	13	9.41
35.5 - 40.5	7	5.06
Total	138	100.00

Mean = 22.70
SD = 7.40

From the above data, we can observe that more than 50% of the respondents had more than 20 years experience in the Bank.

Table 4 :

requency distribution of the subjects according to their experience as officers in the Bank.

Experience as Officer (in years)	Frequency	Percentage
3.0 - 5.5	4	2.89
5.5 - 10.5	12	3.68
10.5 - 15.5	29	21.01
15.5 - 20.5	44	31.88
20.5 - 25.5	29	21.01
25.5 - 30.5	16	11.59
30.5 - 35.5	3	2.16
35.5 - 40.5	1	0.72
Total	138	100.00

The above figures show that less than 7% of the respondents were having less than 10 years experience as officer in the bank while officers with experience ranging from 10.5 to 30.5 years accounted for 85.5% .

Table 5 :

Frequency distribution of sampled subjects according to their educational qualifications.

Sr.No.	Level of Education	Frequency	Percentage
1	Upto Graduation	43	31.2
2	Only Postgraduate	14	10.1
3	Graduate with Banking Diploma	57	41.3
4	Postgraduate with Banking Diploma	24	17.4
	Total	138	100.00

The table shows that the respondents belonged to a group with fairly high level of education. Around 60% were having banking qualifications.

Managers who were posted outside India were excluded because of the difficult in approaching them. The population covered only senior officers with a minimum of 3 years experience in their respective grades and many of them were with the bank for more than 10 years. These officers belonged to various linguistic groups, family background and had attended at least one in Bank training programme. They belonged to varied age groups, castes, community and religious differences. They belonged to various states in the country.

The Bank had 878 urban, metropolitan and semi-urban branches by the end of 1984 at the time of sample selection where the Managers in Grade II and above were working. Most of these branches were spread in Northern, Western and Southern states of the country. Of these 878 branches, a total of 95 branches (10.8%) from the states of Gujarat, Andhra Pradesh, Maharashtra, Kerala, Tamil Nadu, Rajasthan, Utlar Pradesh, Delhi, West Bengal, Bihar, Goa and Karnataka were randomly selected for data collection. A stratified random sampling method was used.

As the size of the population of the Chief Managers and Regional Managers (Scale IV) was small and there were frequent changes and transfers, in this category, the entire population in this category was considered for sample purpose and no restrictions of three years experience was made. The total number of sampled respondents accounted to 138, i.e., 11.0 percent of the total population. Similarly, another 138 Senior Managers and Functional heads who (each of them) were superiors in the same function or their controlling authorities in the administrative offices and were superiors to the subjects functionally or administratively, were selected for reporting on the respective subordinates who were included in the sample, on the administrative judgement scale.

Psychological Test

In order to assess the above mentioned 12 Psychological attributes of executives, a survey of psychological tests was made. The following tests were selected (appendices H to M)

Tests	Variables included in the present study	Relevant factors from the test for studying the variables.
1. 16 PF Form 'A' (Cattell-1967-68)	Emotional stability Self-assuredness Shrewdness Critical thinking Practical temperament Tough-mindedness Resourcefulness	Emotionally stable(C) Self-assured (O) Shrewd (N) Critical (Q1) Practical (M) Tough-minded (I) Resourceful (Q2)
2. Dimensions of Temperament Test (Thorndike,1963)	Objectivity	Objective
3. Concept Mastery Test - Form T (Terman, 1956)	Conceptual ability	Ability to deal with abstract ideas.
4. Achievement Motivation Questionnaire (Lynn,1969)	Achievement motivation	Achievement motivation
5 Executive Initiative Scale (developed by the present researcher)	Initiative	Initiative
6. Administrative Judgement Test (Mandell, 1950)	Judgement	Administrative Judgement capability.

The first five were self-rating tests whereas the last one was to be filled by an officer closely connected with the functioning of the officer on whom the questionnaire was to be filled.

Description of Tests

The 16 Personality Factor (16 P.F.) questionnaire constructed by R.B.Cattell (1957) gives comprehensive information in the shortest time about a large number of personality traits. It is a simple one no writing is required on the part of the respondents. It may be used as a group or individual test for persons of 16 years or older. There are 3 forms viz., A,B,C. Forms A and B can be used for high school graduates or higher college students while Form C which is briefer is intended for unskilled and low educated group. The forms A and B have 187 items each and would require a minimum of 35 to 40 minutes each.

The test measures following 16 independent dimensions :

01.	Factor A	Reserved	vs. Outgoing
02.	Factor B	Concrete thinking	vs. Abstract thinking
03.	Factor C	Emotionally less stable	vs. Emotionally stable
04.	Factor E	Humble,Mild	vs. Assertive, Independent
05.	Factor F	Taciturn	vs. Enthusiastic
06.	Factor G	Expedient	vs. Conscientious
07.	Factor H	Timid	vs. Spontaneous
08.	Factor I	Tough minded	vs. Tender minded
09.	Factor L	Trusting	vs. Suspicious
10.	Factor M	Practical	vs. Imaginative
11.	Factor N	Forthright	vs. Shrewd
12.	Factor O	Confident	vs. Depressive
13.	Factor Q1	Respecting established ideas	vs. Critical
14.	Factor Q2	Sound follower	vs. Resourceful
15.	Factor Q3	Undisciplined Self-conflict	vs. Controlled
16.	Factor Q4	Relaxed	vs. Tense

Besides, it can also be used to measure following 4 secondary dimensions :

I.	Adjustment	vs. Anxiety
II.	Introversion	vs. Extroversion
III.	Tenderminded emotionally	vs. Alert Poise
IV.	Sub-duedness	vs. Independence

For the purpose of this study, Form `A' was used. There were 10 to 13 items for each factor. Under each item 3 alternative answers were provided against which the respondents were to indicate their responses by marking one of the items.

Out of the 16 factors covered by this test items relating to 7 factors only were excerpted for use. Number of items for factors ranged from 10 to 13 giving a total of 83 items for all the 7 factors.

The reliability coefficient obtained on 450 young audit males and graduates with 354 items in forms A and B, for the factors ranged from .71 to .90 (Cattell,1947). The consistency coefficient for the factors included in the study were as below :

C = .93	Q_1 = .71
I = .76	Q_2 = .79
M = .88	O = .85
N = .79	

The validity for the combined items in Form A and B were

C = .76	Q_1 = .74
I = .84	Q_2 = .81
M = .74	O = .91
N = .73	

Thorndike's Dimensions of Temperament (TDOT, 1966)

The Thorndike's Dimensions of Temperament developed by R.M.Thorndike (1966) is a self-reporting personality inventory. The individual is required to describe himself with respect to 10 dimensions of temperament viz. sociable, ascendant, cheerful (objective), placid, accepting, tough-minded, reflective, impulsive, active and responsible. It is suitable for high school and college students and other adults of comparable educational level and requires 35 to 45 minutes for completion. The inventory is structured in a forced choice pattern. The 10 statements reflecting each of the 10 dimensions are presented in a single forced choice set. The respondent is asked to choose the statements that are most like him and the statements that are least like him. There are 20 sets and each set has 20 items. TDOT was tested on a sample of 4000 students in grade XI and XII and 1493 college students (Thorndike, 1966). The percentile norms for each group of males and females were worked out separately. From the test scores obtained from 100 cases of subjects from each

grade and size of the norms sample, the reliability of 10 traits were ranging from 54 to .87. The reliability coefficient for the for the dimmension "objective" ranged from .68 to .87. TDOT scores on 147 graduate students in education correlated with self rating obtained after a week yielded uniformly positive and significant results, the correlation coefficient ranging from 43 to .73. Each factor in the scale has two ends viz., positive and negative and is indentified by titles and associated with the positive end. The positive end of the `objective' scale is described as "cheerful, objective", while its negative end is described as "gloomy, sensitive". The brief description of the 2 ends of "objective" factor is as below :

Cheerful, Objective (positive end)

Seems to feel generally well and happy, satisfied with his relations with others, accepted by others, at peace with the world.

Gloomy, Sensitive (negative end)

Often seems to feel moody, depressed, at odds with himself, sensitive to the criticism of others, prone to worry and anxiety.

TDOT test was screened and on the basis of key. All the 20 items under Objective sale were chosen for the study.

The reliability coefficient of the objective scale for college students (Thorndike, 1966) is as below:

Male (N = 100)

R tt	Mean	SD
.62	- .8	5.9

The correlation between `objective' factor in this test and `objectivity' of the Guilford Zimmerman Temperament Schedule was.54.

Concept Mastery Test `Form T'

The concept mastery test `Form T ` (CMT) of Lewis M. Terman (1956) is an instrument to measure ability to deal with abstract ideas at high level It measures intellectual functions similar to the general factor (g). It is useful to assess mental ability of superior and gifted individuals. It consists of 2 parts, the first part is of 115 items and is designed for identification of synonyms and antonyms and the second part consists of 75 items which are designed for completion of analogies. The analogies employ both verbal and numerical concepts, and they are drawn from a wide variety of subjects and fields such as physical and biological sciences, mathematics, history, geography, literature and music.

It is applicable for adult college graduates. As it is a power test, there is no time limit. The mean scores on the CMT for 10 groups of gifted children, graduate students, engineers,

air force captains, etc., ranged from 60.1 to 136.7 with a standard deviation ranged from 28.5 to 42.7. The reliability pattern obtained by correlating test form `T` with previous more difficult test Form `A` tested on 4 of the above groups ranged from .86 to .94.

Terman and his colleagues employed a number of criteria in their validating studies. For a group of gifted persons and their spouses Concept Mastery Test (CMT) and the Otis Self-administered Test of mental ability correlated 70 . The mean score on the CMT was significantly associated with their levels of higher education achieved. The correlation coefficient was -.49 when it was correlated with grade point averages of a group of undergraduates (N=97)

The difficulty level of the test was very high. It was revealed during pretesting that many of the items could not be attempted by an average respondent. The items were therefore, examined. Some of the reasoning items were very uncommon. A few terminologies were never heard in Indian culture. The portion on vocabulary was of very superior standard. On the basis of the comments from respondents at the pretesting stage a screening was made and only 75 items from part-I and 50 items from part-II were retained.

The final test with these 125 items was administered on 160 sampled subjects, selected on random basis. They were bank

executives, most of whom were of middle age and with high educational qualifications. Only 138 valid tests duly completed in all respects were received. No time limit was fixed as it was a power test. Scoring was made as per the procedure given in the manual for each part separately and final scores were combined for each respondent. The mean and standard deviation of scores obtained were 39.7 and 26 0 respectively. The reliability of the test with 125 items retained was calculated with the use of Cronback's alpha formula (Guilford, 1954). The obtained value was .95, showing the high consistency of the revised test.

In this study, the validity of the test with 125 items was obtained by correlating it with the Administrative Judgement Test and its coefficient was found to be .21 (N= 138). It was found to be significantly correlated with resourcefulness (r=.26) and achievement motivation (r=.17), in a sample of 138 executives.

Achievement Motivation Questionnaire

The Achievement Motivation Questionnaire (AMQ of Richard Lynn, 1969) was used to measure McClelland's concept of achievement motivation. The scale is derived by factor analysis and most of the components of achievement motivation are loaded on it. It has 8 behaviourally anchored questions requiring the respondents to circle off either `Yes` or `No` against each questions. 4 questions are so designed that `Yes` answer against

each would get 1 mark and for other 4 No answers would get 1 mark each. Factor loading of items ranged from .37 to .45. The mean scores of 3 groups of entrepreneurs, professors and managers (Lynn, 1969) were as below :

Senior Managers	Average Managers	Entrepreneurs	Professors
5.91	6.20	6.82	6.54

The scale is independent of neuroticism and introversion-extraversion.

Administrative Judgement Test

The administrative judgement test developed by United States Civil Service Commission is a 39 items rating scale (Mandell,1950). The rating is to be made on a 5 point scale against each items. The test measures a broad understanding of the processes of administration in any organization government or private. The questions measure the common knowledge in the administrative processes and not technical knowledge in any field. The correlation between the administrative judgement test and the rating by the supervisors and peers in a group of 127 Senior Federal Administrators in the U.S.A. was .53 (Forehand and Guetzkow, 1965). In a few other studies (Mandell, 1950), correlations were ranging from .50 to .68 with job performance and from .28 to .56 with grade levels.

Executive Initiative Scale (EIS)

The Executive Initiative Scale was specially prepared by the present researcher for the project. It is a 5 point scale to measure initiative trait of college educated adult individuals. It can be administered in group or individually. It is effected to be very useful in industry. It consists of 8 items with Cronbach Coefficient alpha reliability of .61 calculated from data obtained from 138 executives. Details regarding the construction of the test will follow soon

Other Attributes

The performance appraisal forms for the executives under study also contained the following qualities which are appraised by their superiors along with performance appraisal :

1. Ability and readiness to learn.
2. Knowledge.
3. Conceptual skills.
4. Decision making.
5. Stress tolerance.
6. Relational skills.
7. Risk taking ability.
8. Creativity and innovativeness.
9. Dependability.
10 Initiative.

Two of the above attributes namely, conceptual skills and initiative were already covered by the tests administered to them. Therefore, the remaining eight dimensions were included along with the 12 variables mentioned above, for the study.

EXECUTIVE INITIATIVE SCALE (EIS) CONSTRUCTION

Preparation of the scale :

Executive Initiative is a quality of independent action and inventive behaviour; it is the ability for original ideas and making a start. This concept was analysed for identifying the key factors in the trait.

For developing further understanding about these elements literature was surveyed,comparison was made with definitions attempted by authors and discussions were held with bank executives. As a result of the above process, the following elements of the initiative trait were identified :

(a) independent and prompt action; (b) originality and innovation in approach; (c) taking action and solving problems inspite of barriers; (d) practical and human while solving problems; (e) working until the results are achieved and the goal is reached.

A list of concrete case reflecting initiative of executives were developed on the basis of these factors. The incidents were so developed that each one of them could contain most of the

elements of initiative. A large number of live problem and situations relating to the lives of executives at work, were initially collected.

Each problem was described in indirect speech in 3-4 lines. Care was taken to cover various types and situations so that the testes could find the items as familiar and all could be attempted. They were screened and only those problems which were generally and frequently experienced by executives at all levels and required executive action were retained. 20 such problems were listed after proper editing. The responses were structured in the form of the most probable solutions. Against each problem, 5 alternative solutions were evolved and were written in the form of statements. The statements presented initiative taking behaviour of the respondents, each falling on one of the points of a continuum consisting of the lowest degree to the highest degree of initiative. The response statements under a question were kept as per the rank order of initiating showing behaviour and were numbered as a, b, c,d, and e where `a` meant for the lowest degree of initiative, `e` the highest degree and b,c,d were indicative of intermittent degrees.

This type of response scale was prepared with an object to reduce faking because in direct questioning people would tend to give socially desirable responses. This scale was preferred in order to overcome the problem of this interpretation in

understanding the trait while responding. In each situation the respondent was required to imagine himself to be the decision maker and to decide any one of the five alternative ways given therein.

Instructions for filling were prepared. An appeal was made to give frank answers. They were requested to give the most natural spontaneous answer to each item All items were required to be attempted. Respondents were requested to mark their answers on the test pages only for their convenience. Each respondent was required to tick mark (-/) against one of the responses under an item.

A scoring key was prepared and it was decided to award scores as follows :

a	1
b	2
c	3
d	4
e	5

It was titled as the Executive Initiative Scale (EIS).

Item Analysis :

The test was presented before 5 psychologists. They were outstanding professors in the University and were well versed in test constructions, theory of personality and managerial

behaviour. The judges were requested to give their comments on clarity, contents of the items, easiness in understanding and responding and the construction of the scales. They were requested to evaluate whether the solutions were actually representing initiative behaviour and to assign the rank order to each statement.

The judges were first allowed to make their notes and subsequently discussions were held with each judge independently. Editing was done for ambiguity, complexity, duplication and possible mis-interpretation of phrases. Definition (for each degree) was evolved to be used as bench mark for scrutiny of items. The comments of each judge were noted on separate sheets of paper and they were tabulated. Analyses were made on inter-judge agreements and disagreements. Only those items on which judges were unanimous and not contradicting, were implemented.

Item wise screening was made. Seven items were dropped because the judges did not pass them and there were inter-judge disagreements regarding their scale values, clarity, etc. The preliminary form of the test was prepared by retaining 13 items on which there was 100% agreement among the judges. The scale was then put to pilot testing

The target group for whom the test was prepared consisted of college educated adults, who could read, write, speak and understand English very comfortably. For this reason, the sample

may be considered as very similar to the target group of the main study (the English educated executives). The subjects consisted of 96 English medium students of B.Ed. (Bachelor of Education) class in the department of Education and Psychology of the M.S.University. All these students were atleast university graduates in one or the other subjects The majority (82%) of these students were master degree holders.

The administration of the test was made on the subjects in one group by giving time of more than one hour. The purpose, the method and the contents of the test in brief were explained to them. The testees were also requested to give their comments on the difficulty faced by them and to make any other suggestion on various aspects of the test. Out of the total filled tests received, only 85 forms were found to be usable. The product moment correlation of scores between item scores and the overall (total) score were calculated. The items having r values above.01 level of confidence were considered significant and were retained for the final form of the test. The analysis resulted in allowing only 8 significant items to be retained

The test was further administered on a sample of executives. This time care was taken to make the sample as close to the population for whom the test was meant as possible. 138 executives from bank in study were selected, on a random basis. It consisted of middle aged (around 45 years) executives from

both operation and administrative functions. Most of them were graduates and some of them were postgraduates a few of them having banking qualifications. Many of them were having more than 20 years of experience in the Bank. All of them were speaking and understanding English. It was a composite group, members of which belonged to different socioeconomic strata. Administration of the scale was made individually to these subjects and responses were scored. Individual-wise total scores were computed and their reliability was calculated. The reliability of the test (consisting of 8 items) was calculated by using formula for Cronbach alpha (α) coefficient as below :

$$\alpha = \left[\frac{n}{n-1}\right]\left[1 - \frac{\Sigma V_{ij}}{V_t}\right]$$

ΣV_{ij} = Sum of variance of 8 items of the test

V_t = Variance of total scores

n = Number of items (i.e., 8)

The obtained reliability for the executive group was .61.

Factor Analysis

The factor analysis of the test was carried out with a view to find out the number of factors involved in the test and also to find out the factor loadings of items The study carried out on the sample of 138 bank executives. The test scores on the 8

items of the test administered on these 138 executives were analysed and the nature of distribution of the scores was studied.

Mean and standard deviation of scores of each item are given in Table 6.

TABLE 6 :

Means and standard deviatons of the scores on the Executive Initiative Scale (EIS) items.

Item	Mean	S. D.
1	4.04	0.38
2	4.46	0.71
3	4.43	0.97
4.	4.76	0.86
5	4.08	0.71
6	3.95	0.91
7	4.41	1.00
8	4.07	0.62

The inter-correlations among the 8 items are given in table 7.

TABLE 7 :

Inter - correlations of EIS items.

Items	1	2	3	4	5	6	7	8
1	1.00							
2	0.37	1.00						
3	0.11	0.04	1.00					
4	0.04	0.01	0.02	1.00				
5	0.16	0.15	0.05	0.11	1.00			
6	0.21	0.01	-0.03	0.15	0.11	1.00		
7	0.11	0.27	0.13	0.05	0.15	0.19	1.00	
8	0.13	0.14	0.10	0.01	0.02	0.10	0.06	1.00

Principal component analysis technique was used with the help of SPSS package for factor extraction. Three factors were identified with eigen value of more than 1.00. The factor loadings of items, factor variances and communalities of items are given in Table 8.

TABLE 8 :

Factor loadings of EIS items

Item	Factor 1	Factor 2	Factor 3	Communality
1	.65	.13	-.20	.47
2	.41	-.23	.36	.35
3	.74	.04	-.32	.64
4	.60	-.36	-.19	.52
5	.22	.61	.62	.80
6	.51	.06	.18	.30
7	.21	-.56	.55	.66
8	.32	.47	-.05	.33
Eigen value	1.94	1.10	1.03	
Percentage of Variance	24.3	13.7	12.9	

The three factors cumulatively explained 50.9 percent of variance in the item scores.

Norms :

The data collected from 85 college students (mixed sex group) of B.Ed. class and from the 138 bank executives were analysed.

The means and standard deviations of scores obtained were as below :

	Mean	S.D.
Students	30.4	4.4
Executives	33 2	3.4

Since all the executives were male, the norms were not divided according to sex.

Norms for each group in terms of percentile distribution of scores on the initiative scale is given in Table 9.

Table 9 :

Percentile Norms of Executive Initiative Scale (EIS).

Centile rank	Executives	College Students (Mixed group of both Male & Female students)
100	40.0	40.0
90	36.0	36.9
80	34.9	34.6
70	34.1	33.5
60	32.9	31.9
50	32.0	31.2
40	32.3	30.5
30	31.7	29.5
20	30.8	28.0
10	28.9	24.9
	N = 138	N = 85

Validity :

Besides finding face validity a practical validity study was undertaken. For validating the test the criterion of performance ratings of executives was selected. Two criterion groups were identified by using median performance ratings given by superiors. The median performance value was 4.1 for the sample of 138 . Subjects scoring more than 4.1 were called high performers

and those scoring less than 4.1 low performers.

Accordingly the high performance group was constituted by including all subjects who were rated more than 4.1 when their average ratings for consecutive three years were taken. 65 subjects qualified for this group. The low performance group was constituted by including subjects who scored median rating of less than 4.1. For the sake of uniformity equal number of subjects (i.e. 65) were kept in each criterion group.

The total score for each subject was computed, and means and standard deviations of EIS scores of both the groups were calculated. The obtained values are given below :

	High Performance Group	Low Performance Group
Mean	33.4	32.0
SD	3.1	3.5

`t` test was carried for finding the significance of difference between the means. The obtained t value was 2.5 which was significant at .05 level, indicating the discriminatory power of the test.

Another study of validity was made with the use of the (alpha) reliability value (mentioned earlier). Validity has considered as the square root of reliability value (Garrett. 1973, P. 356). The square root of .61 (the reliability value) came to .78. This could be taken as fairly high validity index.

Administration of Test

Administration of tests was started with the local respondents for pretesting the instructions and improving them. Rapport was established with each individual respondent. They were contacted at their respective departments during office hours to have the benefit of familiar situation.

Office permission for conducting the study was obtained from the top management. The objectives of the study were explained to the respondents along with the standard instructions for the individual tests. It was clearly explained to them that the data collected would not be used for internal decision-making. It was purely meant for research. No individual data would be supplied to the management of the Bank for any purpose. This was intended to gain confidence and to reduce the faking tendency of the respondents. For those who could not be approached because of physical constraints, the questionnaire were mailed by post. Along with the questionnaire, the latter of permission from the organization and a covering letter by the researcher explaining the purpose, objectives and the procedure for handling the tests, were also sent. The potential respondents were followed up over telephone or by a letter or by personal visits. At the later stage, a covering letter from the Asstt. General Manager (HRD & SA) explaining the need for the research and the aim of the researcher was also sent. The respondents were informed that the questionnaire were to be filled anonymously. However, for

identification of respondents the researcher had allotted code numbers to each questionnaire. The mailing respondents were also supplied with stamped self-addressed envelope for returning completed questionnaire directly to the researcher. In brief, all efforts were made to establish proper rapport and to build right confidence among the respondents.

Since the tests were power tests, no time limit was set. They were allowed to fill the questionnaire at their own convenient time. However, their attention was drawn to the specific directions to be followed as given for each test. When tests were administered personally, the researcher tried to avoid any discussions, when the respondents were actually filling the questionnaire.

At the pre-testing stage, some resistance was observed on the part of the respondent on the ground that the test were lengthy and the instructions were complicated.Therefore, care was taken to screen the tests and the instructions. Only the relevant questions covering the factors under study were excerpted from the 16 PF test and Thorndike`s Dimensions of Temperament. The respondents were asked to give their responses on the questionnaire itself by making a tick mark (-/) against the preferred responses. In the Concept Mastery Test, choice was given to the respondents to write `O` (opposite) or `S` (same) as their answer against each item on the test or to use the separate answer sheet provided to them.

The 20 items covering the 'objective' factor from the Thorndike Dimensions of Temperament were typed on a separate sheet of paper and the respondents were required to mark their answers on the same sheet by blackening the space under either 'D' (Different) or 'L' (Like) typed beside each statement to indicate their responses. They were allowed to use either pen or pencil to mark. All items were to be responded.

From the 16 PF test items, relating to the 7 factors under study were excerpted as per the manual. They were typed along with standard instructions for responding. They were allowed to mark their response on test pages only.

The Part-I of the concept Mastery Test consisted of pairs of synonyms and antonyms. The respondent has to mark either O (opposite) or S (same) in the answer sheet to indicate his answer. The Part-II consisted of 3 words and the respondent had to provide the 4th one by selecting one of the 3 choices (a, b or c) given in the bracket to complete the analogy. The respondents were provided with tests on a separate sheet along with a blank answer sheet with a choice to give their responses in the answer sheet or to write on the test itself 'O' (opposite) or 'S' (same) or tick mark (-/), as appropriate.

Similarly, Lynn's Achievement Motivation Questionnaire and Executive Initiative Scale were typed on separate sheets along

with instructions. All tests were pinned together in a set and presented to the respondents.

Scoring

Scoring was done manually by taking help of the scoring keys provided with each test. In the 16 PF test, right answers were given 2 points, the intermediate was given 1 point and the wrong answers were given 0 point. Raw scores for each factor was computed by summing up the scores on each item. An executive was considered to be possessing an attribute (say, emotional stability) if he scored high on the corresponding Factor (Factor-C). However, one was considered tough minded, practical or self - assured if he scored low on the corresponding Factor (namely, I,M or O).

In the Thorndike's scale scoring was made with the use of Plus key and Minus key for 'objective' factor. All the marks as per the Plus key were counted by giving 1 mark to each answer which was tallied with the key answer. Similarly, negative scores were computed with the help of Minus key. The final score was obtained by substracting smaller number from the larger one. Thus scores could be either negative or positive.

In the Lynn's Scale of Achievement Motivation the total score was computed by summing up the scores against the correct answers as per the instructions given in the manual of the of the test.

Each correct answer was given 1 value and the wrong answer was given 0. In the Executive Initiative Scale, the responses were scored by assigning scores ranging from 1 through 5 as per the responses. The total score was obtained by summing up the values of 8 items.

In the Concept Mastery Test, the total score for an individual was obtained by summing up the scores on Part-I and Part-II. In Part-I of the test, the score was computed by giving 1 mark to the correct answer and totalling it. Similarly, the number of wrong answers were also calculated and each wrong answer was assigned a value of 1. The sum of the values for wrong answers was found out. A total score of the part I was computed by substracting the wrong answer value from the right answer value.

In the Part-II of the test, the right answers were given 1 score and their total was obtained. Again the number of wrong answers were counted. The final score in the Part-II was computed by substracting the number of wrong answers from the number of right answers. When more than one choice was marked against an item or an item was omitted, all such items were disregarded while computing the final score.

In the Administrative Judgement Scale, scores ranging from 1 through 5 were assigned. A score of 5 was assigned to `Strongly agree' response and score 1 was assigned to `strongly disagree'

response. Scores of 2,3 and 4 were assigned to the intermediate categories. The total score was computed by summing up the scores on the 39 specific items.

Criterion

The criterion used for the study was the annual rating of performance called the Employee Performance Review ratings. The organization used a performance appraisal questionnaire, filled annually in respect of each officer by his superior. It was a graphic rating form containing items in the form of key responsibility areas with questions on the administrative approaches. The work performance part basically enquired into 'what' had been done and 'how much' had been done. The part relating to demonstrated supervisory/managerial approach enquired as to 'how effective' was the executive in application of the processes of planning, organizing, staffing, directing and controlling. These dimensions were varying from form to form depending upon the work responsibilities.

There were 5 appraisal forms They were designed according to the degree of responsibility and functional specialization of the officers. Table -10 gives the details of the forms.

TABLE 10 :

Perfromance Appraisal forms in the Bank

Form No.	Category	No. of items
2	Officers in Administrative Offices	20
3	Branch Managers, Senior Branch Managers and Accountants in large branches	46
4	Regional Managers and Chief Managers	34

The form numbers 1 and 5 were meant for officers in Junior Management and Faculty Members, respectively. As one of the objectives of the system was to use the information for promotion, appraisal was made annually to curb the tendency of inflating ratings.

Under the system two appraising authorities were provided with specific role for each. The immediate superior was the first appraising authority called Reviewing Authority since he reviewed performance. He was entrusted with great power and responsibilities to interact with the appraisee, understand his performance and maintain a record which could be used at the time of annual appraisal. The superior's superior, called Final Review Authority had the role of a watchdog and to see that appraisal was made objectively. When desirable, he could change

ratings and give justification for them. The ratings given against the performance items in the appraisal from were in the form of letters A, B, C, D and E. `A' rating was defined as `outstanding', `B' `better than average', `C' ` more than adequate', `D' `adequate' and `E' `barely adequate'.

When `A' or `E' ratings were given the appraising authority gave justifications in terms of remarks and critical incidents. There was also an overall rating given at the end of the performance appraisal form in the same letter form. In order to overcome the problem of subjectivity, if any, in giving overall rating a separate overall rating was derived by an averaging method Only performance related items were included for this purpose. For obtaining the average performance value of an individual for one year the performance ratings given by the superior on the officer were converted into numerical values of 5,4,3,2,1 for A,B,C,D,E, respectively. the average value for each year was computed and the average of the three years average value was used as the criterion for the study.

The scores of the attributes rated by supervisors in the performance appraisal form were separately worked out, in the above manner.

Analysis of Data

The analysis of data was made under two heads viz. Frequency Analysis and Statistical Analysis, as explained below.

Mean score of variables on or which test data are collected and attributes on which rating are collected from EDRFs for the entire sample and for each level of executive and their standard deviations were calculated. Pearson r between scores and performance rating in each group was computed and their t-ratios were calculated wherever necessary.

Analysis was made for different categories as per the hypotheses.

A linear multiple regression model was used for the purpose of identifying the potentials of executives. The average performance rating score was used as the Dependent Variable (DV). There were twenty independent variables as described above, with high inter-correlations between them They were subjected to factor analysis for reducing them into smaller clusters. Factor analysis results were used for clubbing the variables and the composite variables were formed and used as independent variables (IV) for regression equations. A step wise multiple regression analysis was run in computer by using a standard SPSS package. In this programme at each step one independent variable was entered into the regression equation. After adding each variable the coefficient of multiple determination (R^2) was computed and F-test was used to measure its significance. This process was continued till all variables were entered. Semi-partial correlation (Sr) and incremental contribution of each variable

when added to the regression equation was calculated and F-test was carried. For testing the hypotheses, the significance of partial regression coefficient (B) of each variable was examined through t-test.

Background Variables :

In order to estimate the role of background variables like age, experience as officer in bank, educational qualifications, total length of experience in bank. test of significance (chi-square) was applied.

Each background variable was divided into 4 and each significant dependent variable was divided into categories of low scores and high scores on the basis of median scores and chi-square test was applied for each variable to find out whether variables like age, qualification, etc , had any effect on scores obtained by subjects.