CHAPTER III
SCOPE, OBJECTIVES, HYPOTHESES, LIMITATIONS AND RESEARCH DESIGN OF THE STUDY

3.1 Scope Of the Study

One would think that with so much of advancement having been achieved in the field of science, many of old world wisdom concepts would have been completely eradicated and in their places new ones installed, yet the same is not true more often than not. For example many philosophical and metaphysical concepts of the old not only are still around but many of them have been proven to be correct by the latest advances and experiments in Physics, Chemistry, etc. Meditation, similarly is fast gaining acceptance not only as a proven technique of mind control but is being accepted as a Science and not just a fad from ancient Yoga. As a matter of fact, even Yoga has been granted the status of a scientific discipline and a lot of study with the help of many medical and other scientific tests is being done in this direction.

3.1.1 Meditation as a Science: Before the scope of Meditation as a self development technique is discussed it would not be incorrect to first discuss its aspects as a science that could be tested in the laboratories with experimentation. In this regard, the credit of familiarizing the world with the ancient Indian wisdom of the Vedanta philosophy, Yoga and other related texts must go to Swami Vivekanand who boldly proclaimed at the first World
Religious Congress held in U.S.A. at Chicago, that the ancient Vedantic and other philosophies of India were not just figments of imagination but an outcome of thousands of years of experimentation and thinking of the ancient Rishis of India.\(^{(1)}\)

He was the first Indian who with his superb oratory and sharp intellect made his legendary speeches about the ancient Indian technique of Meditation as given in Raj Yoga of Maharshi Patanjali.\(^{(2)}\) He also made an appeal to all those who cared to know and listen, not to accept anything, that Vedanta and ancient Yogic texts claimed, on their face value but to experience it first after practice and then only accept the theories. Last fifty or more years have only proved what he confidently and so boldly pronounced i.e. Yoga and Vedanta are sciences which can be tested, tried and experienced by anyone who has enough interest and perseverance to practise them.

3.1.2 For the purpose of defining scope of this study certain parameters were fixed and accepted as fully and completely validated scientific principles which need no elaboration and justification on the part of this study. This was essential in order to delineate and clearly define the scope which otherwise would become too wide and vast. These parameters are as given below :-

a) The meaning of Meditation as used in this study as a concept and practice is as defined in the Raj Yoga treatise of Vedanta more specifically elaborated by Patanjali in his Ashtang Yoga Practice and for all purposes in Dhyan Yoga of the Bhagvad Geeta (Ref. Chapter IX of Geeta).\(^{(3)}\)
b) Meditation has been accepted as a fully proven science for the purpose of this study and as such the need to prove and elaborate this concept on this count is not within the scope of this study. As such only its application in management as a Self Development tool is the scope of this study.

c) Other Self Development techniques such as Silva Mind control etc. have been accepted as described by their originators in their books or as mentioned by other practitioners. Their validity as science or otherwise again is not within the scope of this study though there is no insistence and acceptance of these as sciences as such.

d) Self Development as a concept has been defined separately so as to make its meaning specific and clear. This is to remove any doubt as to what is implied by this term so far as this study is concerned. It is also accepted that there cannot be a all comprehensive concept of self development. Hence effort has been made to define it from the most acceptable sources.

e) The term and concept of Effective Management have been again taken to mean the qualitative aspect as defined in most management texts. It is necessary to differentiate it from efficient management and hence qualitative aspects of effectiveness alone have been considered.
3.2 **Limitations of the Study**

Scope of this study apart from the above conceptual parameters was also defined by way of restrictive elements by the following.

**a) Time Available** : Though ideally the study of before and after assessment would need to be studied over a longer period of time yet for practical reasons this was not possible. Yet effort was made to consider samples only of 2 years or more of practice. Time restriction also made it mandatory to go for self stated assessment of changes noticed by the practitioners.

**b) Context of Objectives** : Though at a general level the scope could have been very wide and large, yet the objectives of the study give a context which necessitated it to be focussed on specific rather than generalized issues. As such only those areas which the context brought under focus were touched upon and not the peripheral issues.

**c) Management Context** : The entire study was conditioned in a management context and other references such as the spiritual, philosophical, etc., were relegated to this context. Though many a times, it was not possible to completely ignore certain aspects such as spiritual, since Self Development itself has a spiritual dimension. Hence, wherever it was necessary to focus on a specific issue, the focus was defined in the context of Management. As a matter of fact the issue of Self Development itself was viewed more as Self Management issue. The overall effort is to develop an approach which is independent of any religious bias or ideology, scientific and objective in nature and management specific.
3.3 Purpose and Objectives of the Study:

The main purpose of this study can be quoted as "to explore and delineate Meditation and some other Self Development techniques with the specific focus of their applicability in the field of management, categorically to compare and assess their usefulness and effectiveness in the broad perspective of managerial effectiveness." With this specific purpose in mind, the more specific objectives of this study can be elaborated as given below.

3.3.1 Generation, Collection and Evaluation of data pertaining to Meditation and Self Development techniques:

This objective has a two-fold structure, viz. generating the data and collecting the data. The first one i.e. generating data is concerned with designing a methodology and questionnaire with the aim of an approach - both scientific and objective in nature giving little or less chance for vagueness and subjectivity. As also, to create a rationale and framework for the testing of the hypothesis. Second one, i.e. collecting or assimilation of data is the secondary but equally important task of creating a systematic and orderly way of collection of data and of creating a sound database which will further serve the tasks of collation, analysis and correlation of the data in order to test the hypotheses and arrive at certain conclusions which are based on objectives and rationalistic reasoning.
3.3.2 Collecting the data about the practising population in the selected sample techniques/systems by carrying out a systematic survey and generating information required to support the main objective of information regarding the more prevalent meditation and other techniques of practice. Here the approach could have been again by two methods:

a) Collect data of general population sample without regard to any specific system of self development. Obviously this approach though not biased towards any system is extremely tedious and impractical since, it is not known, as to how many and which persons of the selected sample, may or may not be following any specific technique or system. It would have been not only very time consuming but also a wild and blind shot in the dark so to say.

b) Second more practical and time saving method was to concentrate, first on specifically identified sample of systems and then identify the sample of randomly selected practitioners or users of these sample techniques and subject them to survey for generating the necessary data. This method is both time saving at the same time more rational since no secondary data is available to outline even the small percentage of total population engaged in these activities. In the absence of any official or unofficial survey either at industry level or at government or non-government organizational level the sample population was completely unknown and undefined. Under such circumstances, it was necessary to depend upon whatever unofficial and unorganized sources of information available in order to first identify the systems that are prevalent, particularly in the field of Management.
and then to identify the sample population practising the selected techniques. It is felt that this methodology under the circumstances was as unbiased as possible a sampling technique and also reasonably reliable. Given the constraint of time available and manpower available this was the most practicable method for data collection.

3.3.3 **Assessment of the Need Set, Awareness and Attitude.**

The specific aim was to generate and collect Data pertaining to evaluation of Need set of Managers in respect of Self Development through primary surveys of common group. For this purpose, non-selective random sampling method was thought to be the most appropriate method. The objective of the survey was to assess and evaluate -

a) Level of awareness of about Meditation and other techniques of Self Development;

b) Assess the Attitude towards such systems;

c) If possible, create a Preference and Need set by assessing both qualitative and quantitative potentials of a required system and response to it.

3.3.4 **Evolving a Model System of Self Development** : The last objective of the study was to evolve a model system of Meditation or Self Development if possible. If that was found to be non-feasible then to suggest which of the systems fulfilled the Need set at least in minimum required aspects and recommend these for their effectiveness.
3.4 Hypotheses of the study:

Based on the objectives of the study and also the scope and purpose of study following set of hypotheses was evolved for testing and validating through selected sampling and evaluation methodology.

**Hypothesis One** :-*Meditation as a Self Development technique is the need of managers at all levels of management and useful in improving the effectiveness of management.*

**Hypothesis Two** :- *Evaluation of various techniques of self development is possible by identifying the Need set of the managers in this regard.*

**Hypothesis Three** :- *A model Meditation/Self development method useful for managers in improving effectiveness is essential and possible to be recommended from the existing techniques or a combination of them.*

3.5 Research Design and Structure:

In evolving a suitable research model for testing of hypotheses following parameters were used.

a) **Uniqueness of the research topic and lack of secondary data** : As regards to Meditation and its application in management no other similar research work was available at least in the well known universities of India. Efforts were made to trace such studies in other countries but there too the application of Meditation was mainly in religious, spiritual or health fields but none so in management. In India except for two systems viz. Sri
Aurobindo’s Auroville Society for Integral Yoga and Sahaj Marg system of Sri Ramchandra Mission no precise research work in this area was available in other systems. Though Sri Ramkrishna Mission has some literature pertaining to this yet its nature is more of spiritual rather than management oriented. As such there were very little parallel studies available for reference in this regard.

b) Issues of Self Development: Self Development and Self Management as essentials of effective management have evolved only recently. As such not much literature in terms of research is available on these topics too. As a matter of fact, except for one or two detailed studies (as referred in the Chapter on Book/Literature Review) of western origin not many authentic works were available which could be of much guidance and use.

c) Balance of Representativeness as well as qualitative selectiveness of sample systems and sample population. This was necessary in order to ensure an authentic qualitative sample which would reflect genuinely the system’s profile as well as its usefulness in management.

d) A fair and non-committal assessment and evaluation of data: This necessitated a quantitative as well as qualitative evaluation model. The questionnaire itself had to be designed extremely carefully considering the sensitive and spiritual dimensions of the subject. The questionnaire had to be qualitatively absolutely excellent in order to receive qualitative response.
3.5.1 Evolving & forming a Need Set through Survey: In order to evolve a basic framework of awareness about and requirement of Meditation or otherwise of any development technique, a questionnaire was designed to assess the same through an actual survey. This of course was only indicative of presence or absence of a need and also the general attitude of the managers towards meditation and other Self Development techniques.

3.5.2 Collection of Secondary Data: The entire methodology for collection of secondary data has been dealt with in detail in Chapter II. Hence it is not necessary to elaborate upon it here again. Only point that can be added here is that a selective approach rather than collective approach was adopted and the criterias used for the same have been given in Chapter II.

3.5.3 Primary Data Collection & Design of the questionnaire for the survey: Primary Data was divided mainly in two categories viz.

a) Data regarding Awareness and Need set;

b) Data regarding selected sample of practitioners of system and their experience in the context of management.

Accordingly three types of questionnaire were designed i.e. Pilot Survey Questionnaire, Questionnaire 'A' and Questionnaire 'B'.

3.6 Design of Questionnaires

3.6.1 Pilot Survey Questionnaire: This questionnaire was very simple and short which aimed to elicit in the following basic areas, viz.

a) Awareness
b) Need / Necessity  
c) Usefulness in Management  
d) Expectations & Design of System.

The questions were objective type with Yes/No or other options and were distributed in a non-selective random sample of people, mostly selected to managerial jobs such as techniques of Management, Managers and Executives from business, industry and professions involved in jobs related to Management, etc. The Pilot Survey later served as the basis for the questionnaire for Need Set survey and Awareness Survey.

3.6.2 Need and Awareness Survey Methodology

a) Selection of the Sample Group: The selection of this group of respondents who were not belonging to any particular Self Development System was done in a purely random selection method. The only criterion used was that they had to be involved or connected with Management either in practice as a career or in teaching, or self employed (business). They were all thus Practising Managers in some way.

b) Sample Size: As discussed in the design of sample methodology since the universe population size was undetermined (infinite – not known). The size of the sample for this group was kept open yet restricted to practical possibilities. Even then a size of 100 respondents was targeted and response obtained from them.
3.6.3 Questionnaire ‘A’ Design:

The Design of this questionnaire was divided into 3 parts
a) Part I – General information of the respondent, occupation, education, marital status, etc.
b) Part II – It dealt with awareness aspects and attitude towards meditation.
c) Part III – This was aimed at extracting expectations about the Self Development technique/Meditation system.

The overall design was objective and was structured to bring out qualitative as well as quantitative aspects. Number of questions were less and purposely kept very direct and objective so as to extract an objective, definitive response.

3.6.4 Questionnaire 'B' Design:

This questionnaire was the mainstay of the most important survey i.e. the actual practitioner’s response and the questionwise design was divided into 4 parts as given below.

a) Part I – General information as Age, Sex, etc giving the general profile of the respondent.

b) Part II – Information regarding Meditation/Self Development techniques being followed, its main features, etc. It also dealt with the expectation aspects and effectiveness aspects and overall recommendations of the respondent based on his experience and impact of the system.
c) **Part III** – This part was aimed at assessing the respondent’s knowledge and basic attitude towards Meditation and Life Management. It was a combination of subjective and objective qualities and tried to quantify certain aspects in spirituality also.

d) **Part IV** – The most exhaustive and the most crucial part of the questionnaire, where the integrated model of Self Development was used as the basic framework for the questions of basic 3 areas of Self Development i.e. Self Management, People Management and Business Management. A more detailed explanation and discussion of this model is done separately in Chapter VI of this study. Hence it is not being dealt with here. The three basic areas of Self Development Model were further divided into following sub-areas,

**Self Management**

a) Time management,

b) Information Management,

c) I. T. Management,

d) Health and System Management,

**People Management** – Dealt with managerial skills as Human Resources Management, problem solving, communication skills, etc.

**Business Management** – Dealt with financial, marketing, material, personnel Management, etc.

3.6.4.1 Some unique features of the Questionnaire ‘B’ are listed below-
a) Format Used- Format of the questionnaire was such that computerization becomes easy.

b) Before and After format of objective questionnaire and Part IV.

This mode of response was adopted in order to quantify the answers in an objective manner. This was also necessitated due to the control aspect which generally could have been through a control group as well as by monitoring the sample population for the period of study, say two years or so, and then subjecting them to the assessment of changes noticed in the given parameters. However, this was not adopted due to following reasons.

a) Practical Problems of Monitoring: The practical problems mainly of monitoring the sample group, specially the element of losing the sample response population, at least some of them due to transfers, etc. made the collection of data after two years impractical. Moreover this not being a study on Health or Physical matters alone, the parameters could not have been monitored by any physical or otherwise tools to assess before and after aspects as such a via media of self assessment before and after two years by the respondents themselves was followed.

b) Subjectivity of some of the parameters: Self Development in the end is an aspect which is very personal and subjective. Afterall, no one can really sit in judgement on somebody else to assess whether one has progressed or developed in a particular aspect of self development or not. As such certain subjectivity in this aspect was not only expected but also accepted,
since afterall the entire exercise of self development is to be exercised by people themselves in Self Management. Any external agency would have been superfluous in monitoring such an individual and personal aspect as self development. An individual is the best judge on whether a particular technique has been effective or not in bringing about any improvement in his managerial capabilities after its practice. Involvement of any external agent would have resulted in the loss of spontaneity and sincerity in responses.

c) Absence of any other benchmark or study for Guidelines:
This being the first such study, there was no other guiding secondary study available for guideline as such. Hence it was thought fit to have faith in respondents and ask their own assessment of before and after aspects of the parameters.

3.7 Sampling Methodology:
The parameters for the selection of Methodology for sampling are as given below:

a) The population size was unknown and no inference could be drawn about it.

b) The no. of systems prevalent was also unknown and hence had to be fixed.

c) In the absence of correct population size, sample size too was difficult to decide.
d) No. of variants were more than one which was an important consideration for the selection of sampling technique.

e) In the absence of correct data for deciding a sampling frame, a frame had to be constructed before the survey was undertaken.\(^{(5)}\)

3.7.1 Design of a sampling frame: The main factors considered here were a complete lack of data regarding a list of systems as well as list of managers practising these. As such it was necessary to construct own sampling frame based on following principles.\(^{(6)}\)

a) To ensure that it is unbiased.
b) It is correct.
c) It is accurate.

For ensuring these three, the no. of systems of development to be studied was not decided prior to survey but a random list of systems in prevalence was drawn from secondary data, interviews and discussions with some known authorities and organizations. Later, depending on the quality and quantity of data available the list was short-listed to cover the most prevalent systems. The frame was geographically restricted to Pune urban area in order to cope up with the restrictions in terms of resources availability.

3.7.2 Deciding on the suitable sample size – The choice of the sample size was governed by the following principles.

a) Authenticity and confidence in the data collected i.e. level of certainty that the characteristics of the data collected will be representative of the population.
b) Tolerance level of margin of error i.e. the accuracy expected.

c) The analysis technique also was an important factor in deciding the size.

d) The size of total population from which sample was drawn.

As brought out by many an authors, the final sample size is always a matter of judgement rather than calculation. For many research questions and objectives your need to undertake particular statistical technique will determine the threshold sample size. Under such circumstances, Dr. Mark Sanders' advise (quoting 'Economist', 1993, a minimum no. of 30 for statistical analysis) provides a useful rule of thumb for the smallest no. in each category within the overall sample. (7) In this case, however, two overriding factors governed the judgement about size and i.e.

a) The population size was indefinite i.e. not known and only a guess could be made about the population.

b) As such it was decided to go for stratified random sampling. Following points were kept in mind, while stratifying the domain or data. (8)

i) The extensive information of all items included in a domain was selected on the basis of coherency and forming a ‘whole’.

ii) The size of each stratum (system in this case) was kept sufficiently large enough to enable use of random sampling technique (15 respondents/system in this case).
iii) The stratifying of various systems was done based on a common and similar relation to domain and in themselves were homogeneous.

iv) Each stratum/system was distinct and had its own characteristics different from others.

v) The population of random sample from each stratum was same as the proportion of stratum from the domain. Hence since the domain had 12 strata the proportion of each stratum was kept 1:12, 1/12 or nearest to it. So out of a sample size of 180 items, 15 items or respondents were selected from each stratum. Thus, the design of the stratified random sample was as given below.

- Total sample size – 180 respondents.
- No. of strata/system under study – 12 nos.
- No. of respondents/Stratum (system) – 15 (1/12 proportion)

Thus 15 respondents/system were randomly selected to respond to the questionnaires making a total of 180 respondents.

3.7.3 Methodology for Qualitative & Quantitative Analysis of the Data

The comparative study of the qualitative as well as quantitative aspects of the system under study was done with following objectives in mind:

a) Work out a methodology for qualitative and quantitative analysis of the response data.
b) Work out a standard for assessment in a quantified form for Section III and IV of the response sheets dealing mainly in attitude, knowledge and the skills model of self development.

c) Highlight the salient features of each system and its suitability for the main purpose i.e. effective management.

3.7.4 Methodology for Qualitative Analysis (Section III). This has been dealt with questionwise as follows:

a) Q-27, Mission of Life: Generally it was expected that the respondents being from management field would be aware of what the meaning of mission stands for in business and in life. It is the Raison-de-etre or purpose or the 'why' of life. In judging the responses following points were given weightage,
   i) clarity of vision
   ii) purpose and its visualization. The highest purpose was considered the ideal response.
   iii) Simplicity and achievability as well as practicability in life.

The responses were judged out of a score of maximum 5 points.

b) Q-28, Importance of Spirituality. Considering that spirituality is now an accepted element of life as well as business, a respondent's awareness and attitude towards it and his translation of it into life goals and actions was judged. A maximum score of 5 points.
c) Q-29- **Attitude towards Business Ethics and Integrity.**

Unless managers themselves are committed to these values they can not inculcate them in others. Score points given were 2.

d) Q-30- A multiple option question about the importance of material success in life ranging from an extreme of “most important will do anything for it”, to the other ‘Not important at all’. A balanced reply was expected to fetch 4 points.

e) Q-31- A multiple option question about reaction to any situation. Maximum score of 3 for 2 of the options, i.e. (a) and (b).

f) Q-32- **Understanding the concept of God** : A multiple option question which fetched score of 3 points for a finer visualization of God's reality. Thus options (b) and (c) followed by (a) and (d) on a points scale 3, 2, 1 respectively.

g) Q-33- **Yes or No option** :- A Guru is considered essential in any training as such a positive response was expected to fetch 2 points.

h) Q-34 - **Concept of Man transcending self and ego**; a yes/no option fetching 2 for positive and 1 for negative

i) Q-35 - A multiple option question about the purpose of Human Birth with choices ranging from a biological chance to significant evolutionary stage. Score points 3 to 1 for options c, d (3), b (2), a (1).

j) Q-36 - Beliefs in themes of Karma, Spirituality, Moksha (liberation), rebirth, evolution of self are thought to be
complementary in fast development as such all positive fetched 3 points.

**k) Q-37 - Goal of Human life.** Options ranged from purely spiritual, self enlightenment to purely material success, comfort and luxury, etc. It was expected that meditation or self development process will aim for a balanced goal like Self Realisation or Enlightenment which were given maximum weightage of 3.

**l) Q-38 - Goal of Business and all Human Activities**

Though repetitive yet more specific in options ranging from profit making (lowest) and making money (lowest) to serving Humanity, Evolution of Human Race (higher goals) more number of higher goals (option a, d, g) fetched maximum 3 points.

**m) Q-39 - Own suggestions.** It was expected for the respondents to come up with useful suggestions, constructive comments, etc., fetching a maximum of 2 points.

3.7.4 A maximum of 50 points were possible to be scored in these questions. Accepting that in some places, subjective elements do play a role, the answers to these were evaluated after consultation with a no. of senior and qualified personalities in the field of Management and Self Development as well as of Meditation and Spirituality. Quantification of qualitative data is always difficult if not impossible. Error of judgement was ruled out by weightage which did not vary too much and help was taken from various authoritative literature written on these topics.
3.7.5 Qualitative analysis was given an equal importance to that of quantitative i.e. Section IV of before and after evaluation (self). This study focussed more on effectiveness in addition to Q-15 of Part II where it was quantified in functional areas in before/after format. Thus, Part II and Part III dealt with the effectiveness aspects, i.e. life/business goals, right attitudes, right understanding, etc. In this regard, it would be interesting to quote both the nomothetic i.e. deduction method as well as the ideographic, i.e. induction method of Research. “Nomothetic Methodologies (Bernard & Morgan 1979 – page 67) have an emphasis on the importance of basing research upon systematic protocol and technique. This is epitomized in the approach of methods employed in the natural sciences, which focus upon the process of testing hypotheses in accordance with the standards of scientific vigour. Standardized research instruments of all kinds are prominent among these methodologies. Emphasis is, therefore, placed upon covering law -explanation and deduction, using quantified operationalization of concepts in which the elements of motive/purpose/meaning is lost, because of the need for precise models of hypotheses for testing. (9)


“Ideographic (Induction) Methodologies ( Burell & Morgan, 1979, Pp. 67) on the other hand emphasize the analysis and subjective accounts that one generates by getting inside situations and involving oneself in the every day flow of life. There is an emphasis upon theory grounded in such empirical observations which take account of subject’s meaning and interpretational
systems in order to gain explanations by understanding. (Gill & Johnson - ibid). \(^{(10)}\)

In this study, rather than depending only on one method, a balance of both has been utilized. The characteristics of the nonathetic method of generation and use of quantitative data while that of generation and use of qualitative data of ideographic method both have been combined to generate qualitative data and to assess and evaluate it with quantitative methods. The format wherever possible has been structured to fit even qualitative data in a systematic structure rather than depend only on subjective meaning system and explanation by understanding alone. As such a combination of 'Etic' and 'Emic' has been achieved. \(^{(11)}\)

**3.7.6 Evaluation of qualitative Data:** As explained in para 3.7.3, the questions were evaluated on the Emic aspects or understanding aspects and then quantified. One can’t however ignore that quantification of qualitative aspects at the best can only be an approximation and there can be always better ways of assessing. Yet the limitations will play an important role in all such efforts and here too it is accepted. One may quote here, “Action research may or may not involve control groups. For example, if it were decided to research the relationship between zero based budgeting and organizational effectiveness, the action researcher would introduce zero based budgeting into an organization and would then monitor its effects, ideally using control groups”.(Research Methods for Managers Pp. 89). Here an effort has been made not to depend completely on one particular method but to have a basic structure and then allow sufficient freedom for
proper conceptualization and explanation based on understanding. Thus, the evaluation criteria of grading qualitative responses on such ideas as 'God' has options which vary subtly in their qualitative understanding. As an example, the response, 'God as a reality which is abstract', is equally valid yet a shade lower in quality than the response, a reality that transcends human mind and religion, which then is a better if not the best response. The other two responses are again limited in their quality, i.e. ‘A non-reality, a figment of man’s imagination', by its complete negative tones while the one ‘A reality as revealed in temples', again by its obvious limitations. Again the context used here for grading of responses was :

a) A response which was positive in nature and supported the process of self development was graded better than its opposite.

b) Responses which furthered the aspects of managerial effectiveness were graded better than their opposition e.g. question in business values and integrity or the one on situational response where it is expected for a manager to be open minded and to have an overall view of the situation. In spite of all the efforts it is likely that some element of subjectivity is still present which needs to be accepted in a subject like this where no standard norms or benchmarks exist. In the end it would be necessary to qualify the quantification efforts with the following :

i) The quantification is comparative rather than absolute considering that there is no standard or ideal response to managerial aspects and issues.
ii) There is no intention to belittle or criticize any particular technique or system but only to highlight characteristics and form a somewhat standardized concept and theory of self developmental aspects. As such the grading is purely from the contextual definition of this research and the researcher would agree that a change of this context could vary and an altogether different grading would be the result.

Inspite of these drawbacks, the study; as is revealed overwhelmingly, in the response profile, has vindicated the variance on its own where surprisingly a very encouraging unity of conceptualization is quite evident in almost all subjective or qualitative matters and though diverse in their nature, the systems underline the same ethical and moral principles more or less, which is quite as expected and is the biggest plus point, to counter any criticism of subjectivism and positivism on the part of the researcher. The role of researcher in the entire exercise has been that of a participant observer and no effort was made to influence the response group in anyway.

3.8 Part IV - Analysis and Study

In this, application of the ‘GOWER’ model of Self Development to assess the impact of the practice of any particular technique/system was done. \(^{(12)}\) As described in the Chapter on Self Development Model, the Part IV is an adoption of the Self Development model as described in the Gower’s book on Self Development. Here the parameters are from 3 main areas of Self Development, viz. Self Management, People Management and Business Management. The Self Management had 8 sub parameters
such as Time Management, Information Management, I.T. Management, Writing Skills, Public Speaking, Health Management, Stress Management and any other category. People Management had 15 sub parameters while Business Management had 10 sub parameters. So a total of 33 sub parameters further divided into smaller Key Task areas and resource utilization aspects - a total of 59 self development parameters were used. The respondents were asked to grade themselves for their effectiveness in these areas on a scale of 1-10, before their start of practice of a particular system and after a minimum of 2 years of practice of the same. A score of 10 indicated ‘Excellent’ grade while that of 1 very poor. The effort here was to quantify an otherwise, subjective and vague aspect on a Likert type scale, to measure the progress as felt by the practitioner himself. A complete confidence was placed in the respondent's response since it was felt that any exaggeration could be scaled down while giving the actual gradings. Accordingly following scale was used to grade the responses in actual points:

The percentage of improvement resulted was obtained by comparing the before and after points (e.g. 5 and 8) collectively for the 3 areas of management and then obtaining total percentage improvement. Though the results were computed for the total it is possible to obtain individual results of each. Accordingly for each respondent, the percentage of improvement in three areas i.e. Self Management, People Management and Business Management were obtained. To evaluate these improvements on a point scale again a
comparative scale of points was used. The scale was designed keeping the following points in mind.

a) Since the assessment is purely a self assessment, there is likely to be an element of subjectivity in judging the improvements.

b) In self assessment two drawbacks could result out of this subjectivity viz. overestimation of the results or underestimation of the same. As such the scale had to be tempered to take care of these two aspects.

c) The scale needed to be neither too minute nor too broad and similar to the 1-10 points scale for before and after studies.

d) Keeping these three elements in mind the following scale was designed to give points grades to each respondent.

<table>
<thead>
<tr>
<th>IMPROVEMENT %</th>
<th>POINTS</th>
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<tbody>
<tr>
<td>01-10</td>
<td>02</td>
</tr>
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<td>11-20</td>
<td>04</td>
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<tr>
<td>21-30</td>
<td>06</td>
</tr>
<tr>
<td>31-40</td>
<td>08</td>
</tr>
<tr>
<td><strong>41-60 (Highest Points)</strong></td>
<td><strong>10</strong></td>
</tr>
<tr>
<td>61-70</td>
<td>08</td>
</tr>
<tr>
<td>71-80</td>
<td>06</td>
</tr>
<tr>
<td>81-90</td>
<td>04</td>
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<tr>
<td><strong>91 &amp; ABOVE</strong></td>
<td><strong>02</strong></td>
</tr>
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</table>

As can be seen the scale has the 41% to 60% range as the most reasonable and balanced percentage in terms of improvement.
which is neither too exaggerated nor underrated as such a maximum of 10 points score was assigned to this range. On both more than 60% and less than 41%, the scale was calibrated in a diminishing pattern, 31-40 and 61-70 being 8 and so on till most underrated 1-10 as 2 and most exaggerated 91 and above as 2. As is evident the subjectivity of both under and over rating has to a great extent been taken care of in this way.

3.8.1 For each system the total score of all the respondents in grade points thus was tabulated in all the areas of management. To obtain the respondent's individual score, the three were added. In order to obtain the system’s overall average score, the average of all the respondent's grade points was obtained which gave the system’s grade point average. This facilitated the following comparative study.

a) A quantified base for studying the performance of each respondent vis-a-vis another.

b) A similar base for studying the performance of each system vis-a-vis another.

c) A comparatively sound quantitative, or quantified profile of each respondent, of before and after performance in the given area was now available and similarly for each system a before and after profile on an average basis was available. This study has been tabulated and presented in the form of tables which follow separately.
d) Use of Reduction Factor or R. F. For the purpose of bringing more rationality, the average scores of each of the systems was further rationalized by applying a reduction factor or R. F. which was worked out as R. F. = Actual no. of Respondents divided by 15. Hence, giving two types of scores, viz. with R. F. and without R. F. For example, if a system had only 5 respondents out of a total of 15, then the average scores were further reduced by 5/15 i.e. 1/3 to give average with R. F. and without R. F.

3.8.1 Application of the statistical techniques of evaluation of the qualitative data. This was done by working out the following :-

a) Standard deviation of the various scores within a given system.

b) Coefficient of variations of each system worked out from the standard deviation.

c) Standard deviations of the before and after scores of the system in various areas of self development, such as Functional Effectiveness, Self Management, People Management, etc. and working out the C.V. of each of the system by taking the average (Mean Value) of each system in various areas and then finding the standard deviation of each of these. From these the lowest and highest C.V. values were worked out. Following values too were worked out for comparison.

(a) Highest S. D. Value (Before)

(b) Highest S. D. Value (After)
(c) Lowest S. D. Value (Before)
(d) Lowest S. D. Value (After)
(e) Highest average score of each system out of 100
    (with Reduction factor and without Reduction factor).
(f) Lowest Average Score

3.9  Hypotheses Testing

For the purpose of hypothesis testing the following two statistical methods were used,
   a) Paired ‘t’ testing of Before/After Data.
   b) ‘A’ testing.

3.9.1 Paired 't' Test: This is justified because Paired ‘t’ test is a way to test for comparing two relative samples, involving small value of 'n' that does not require the variances of the two populations to be equal, but the assumption that the two populations are normal must continue to apply. For a pair ‘t’ test it is necessary that the observations in the two samples be collected in the form of what is called pairs i.e. each observation of the total sample must be paired with an observation in the other sample in such a manner that these observations are somehow matched or related in an attempt to eliminate extraneous features which are not of interest in test. Such a test is generally considered appropriate in a before and after treatment study. The methodology for working out this is attached at Appendix which also gives the results of this test.

3.9.2 ‘A’ test: The null hypotheses acceptance/rejection was also tested by calculating the ‘A’ statistic for the given value of n-1 and
compare them with table value and then deciding the significant value of ‘A’ statistics for testing of null hypotheses for effectiveness of the Self Development techniques.

3.9.3 Other than the above mentioned two, no other tests were thought to be necessary for application as -

   a) The results obtained from the above tests sufficiently proved the hypotheses main part i.e. effectiveness of the various systems.

   b) Multi Variatic Analysis such as ANOVA etc. was not necessary since it was not intended to find effect or impact of any specific factors of analysis on the system but overall effect of the 'sum' of all factors on the system.

   c) Unnecessary superficial testing methods would have only complicated the otherwise straight forward and obvious results of the research study as such these were avoided.

3.9.4 The analysis results obtained in these statistical and other methods were used to work out the findings and observations which are compiled in the chapter VII on the analysis and findings.

3.9.5 **Limitations to the Study and Analysis:** There were major limitations of the following types.

   a) Limitation of the resources available.

   b) Limitation of the availability of Data.

   c) Limitation of the available analytical Tools.
3.9.6 Resource Limitation: These were mainly, constraints in terms of finance, time availability, manpower available for collection of information, etc. Within the scope of the study the available resources were judiciously utilized and efforts made to prioritize the tasks at hand within these.

3.9.7 Data Availability: Major constraints were put on the study due to availability of reliable data both qualitatively and quantitatively, particularly about the strata and about the practitioners or respondents. No readymade data were available and as such the study had to depend on first hand primary source data which was both time and energy consuming.

3.9.8 Limitations of Analytical Tools: Due to the unique nature of the study and lack of any earlier work and methodology, completely new approach had to be designed and this put a lot of restrictions in balancing between creative use of data and authenticity as well as judicious use of available tools and techniques. Effort was done to achieve this within the available resources.
CHAPTER - III

References


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5. Gill and Johnson - Ibid

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7. Ibid

8. Ibid, also

9. Gill and Johnson, Ibid.

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11. Ibid


13. Kothari C. R., op - cit 8