This chapter describes the research design and the procedure for conducting the study. Specifically, this chapter delineates the research methodology adopted, sampling, data collection and data analysis procedures.

Research has been defined by Redman and Mory (1923) as, “the systematised effort to gain new knowledge”. Research refers to creation, in the form of original contribution to the existing stock of knowledge. According to Kothari (2000), “Research in common parlance, refers to a search for knowledge. It is a scientific search for pertinent information on a specific topic. In fact, research is an Art of Scientific Investigation”.

Research is the original contribution to the existing stock of knowledge making for its advancement. It is the pursuit of truth with the help of study, observation, comparison and experiment. ‘Research’ is also referred as the systematic approach concerning generalization and formulation of a theory and the search of knowledge through objective and systematic method of finding solution to a problem.

To implement any plan of research, certain methods of data collection have to be used. Corresponding to multitudes of problem types, there are a plethora of techniques to solve these problems. Therefore, the most
important question that arises in research is what method is to be used under what conditions?

Quite obviously, problems dictate methods to a great extent, as it would be foolish to select methods that are irrelevant or inadequate for the problem concerned. The reverse too holds good as the availability, feasibility and relevance of methods influence problems in many ways. Some problems can not be studied, because methods (or the resources to employ those methods) do not, at present, exist to collect the data implied by the problems. It may also happen that existing methods and even those that can be invented may not be capable of yielding the precise data needed due to time constraint or other intervening factors. In such cases, it may become necessary to alter or modify the problem, so as to make it amenable the requirements of the available methods. Nevertheless, the problem is normally the most important consideration.

STATEMENT OF THE PROBLEM

When Mark Twain made his famous statement, "everybody talks about it but nobody does anything about it," he, of course, was referring to the weather. He could also have been referring to evaluation of training programs—well, not exactly, but almost (Kirkpatrick, 1998).

Phillips (2003) has clearly stated that, even though executives intuitively feel that there is value in providing learning opportunities, logically
anticipating a payoff in important bottom-line measures such as productivity improvements, quality enhancements, cost reductions, and time savings. **Yet the frustration comes from the lack of evidence to show that the training process is really working.**

According to McArdle (1999) very little of investment in training is returned to the workplace. Similar view is also shared by Rothwell (2002) that managers complain that training is not as effective as they would like it to be in changing employee behaviour or improving work results. Adelsbarg and Trolley (1998) noted that even an organization like Dupont in 1998 identified that it offered thousands of open enrolment courses, but the training department in itself had no proof that any course in itself delivered real business value because it only measured level of activity (example number of employees trained) rather than business impact.

According to Bedinham (1997), human resource specialist have struggled to prove that training in non-technical training like interpersonal skills or problem solving, can bring real value for the company and the trainee and agreed that ‘even those which are committed to training will consider that evaluation of training is difficult and time consuming – and difficult to carry out.” “If trainers are going to be successful, they have to be able to demonstrate the outcomes generated as a result of training,” says Rhoda Weiss (Caudron, 2001).
Recent SHRM study by Evakalan-Leiserson (2005) has revealed that even today in almost 80% of cases no analysis of ROI on training is done. In cases where impact of training is evaluated, Rowe (1996) found that, most organizations use “happiness sheets”, level 1 evaluation for delegates to complete at the end of training programmes – and do not tell anything about how effectively delegates have digested the material and will apply it in the workplace.

Rao (2001), in his article comparing management training in Indonesian and Indian health care system echoed similar views, he observed that seldom are efforts directed to evaluate the understanding of participants. The feedback from the participants is usually focused on trainer, training methodology, and the organization of training such as classroom facilities, boarding and lodging. For improvement of training programs in health care in India, the author suggested, evaluation of the participants to see the change in knowledge and awareness. Now, the emphasis has shifted to using data to monitor the efficiency and effectiveness of learning function, says Brenda Sugrue (Davenport, 2006).

Some studies have been conducted to evaluate the impact of training on learning. This is evident by the study conducted by Singh (2001) of 27 supervisors from 10 mills, concluded that as compared to control group, learning scores for training group has improved significantly, demonstrating, training did result in learning.
Research conducted by Sengupta (1999) found that after change in training methodology, there is significant improvement in teaching skills of experimental group of 14 trainee teachers, when compared with control group of 14 trainee teachers. Study conducted by Pattanayak (1998), comprising 1200 employees concluded that while training programs are successful to help employees understand their job requirements and responsibilities (72% of respondents agreed) and effective in developing interpersonal skills (50% of respondents agreed), however, training is not fully effective when it comes to practice what one learns in the day-to-day job.

These studies demonstrate that training has been effective in improving knowledge and some skills of learner; no conclusive evidence is available to evaluate impact of training on business performance in India. Even in developed countries, only 30% of respondents evaluate their training (in relation to) behaviour-job impact (Berk, 2004).

This research examines the impact of training on business performance parameters in service industry, where non-technical knowledge and skills of employees play a critical role. Specifically, this study addresses the following aspects concerning the impact of training on business performance parameters. Does training bring about substantial changes in the knowledge of employees? Does training bring about substantial changes in on-the-job skills of employees? Are the gains in knowledge and on-the-job skills of employees, who were trained higher than of
those, who were not trained? Does training bring about substantial change in business performance? Are gains in business performance for those who were trained higher than of those, who were not trained? Is there improvement in business performance with gains in knowledge and skills of employees?

This study seeks to address such aspects as those above may puzzle organizational leaders and training professionals, who seek to develop employee knowledge and skills to enhance business performance.

**NATURE OF RESEARCH**

Exploratory, descriptive and causal are defined as three general categories of research based on the type of information required and the volume of relevant knowledge pertaining to the subject available at hand. Since these categories of research are not mutually exclusive, any combination of them can, therefore, be applied to a research process according to the need. The nature of the present study also suggests a similar kind of hybrid design. To be specific, exploratory research is found to appropriate for identification of training requirements, defining of intermediate and final business results, finalization of tools for each organization.

Causal type of research also known as experimental research is used for evaluation of objectives, where pre-training and post-training results of
control group and experimental group are compared and relationship is established between intermediate results and final business result.

In this study quasi-experiment research is conducted to evaluate impact of training on business results. The target group is divided in control group and experimental group and both groups work in same environment. While experimental group is provided with training, control groups are not provided with any training inputs. This helps to evaluate the impact of training while keeping the external factors constant.

**SCOPE**

Once, the linkage between training and key business performance parameters is established, this has the capacity to revolutionize approach of training towards skill enhancement and way organizations value training. This will benefit management, who will see return on their investments in training and will use training as a tool to implement their strategic intent. This will also benefit training fraternity, who will be able to get management attention, commitment and resources. This will also benefit academic fraternity for further research.

**OBJECTIVES OF THE STUDY**

The overall purpose of this research is to evaluate impact of training on key business performance parameters in service industry. To accomplish
the research objective, the following objectives have been formulated. The objectives are to determine, for employees in service industry:

1. To find out whether training bring about substantial changes in the knowledge of employees
2. To find out whether training bring about substantial changes in on-the-job skills of the employees
3. To compare gains in knowledge and gains in on-the-job skills of employees, who were trained with that of those, who were not trained
4. To assess whether training bring about substantial change in business performance
5. To compare gains in business performance for those who were trained with that of those, who were not trained
6. To compare gains in business performance with gains in knowledge and on-the-job skills of employees

FORMULATION OF HYPOTHESES

The following hypotheses, in the directional format, are being formulated for realizing the objectives of the study. Null hypotheses and alternate hypotheses of research are listed below:

\( H_0 \): Training will not impact the knowledge of sales and service executives in service industry

\( H_1 \): Training impacts the knowledge of the sales and service executives in service industry
H₀2: Training will not impact on-the-job skill of sales and service executives in service industry

H₁2. Training impacts on-the-job skills of the sales and service executives in service industry

H₀3: Training will not impact business performance of sales and service executives in service industry

H₁3. Training impacts the performance on key business parameters for sales and service executives in service industry

H₀4: On-the-job skills of sales and service executive will not be significantly related to their knowledge

H₁4. On-the-job skills of sales and service executive are significantly related to knowledge of executive

H₀5: Performance on business parameters of sales and service executive will not be significantly related to their knowledge

H₁5. Performance on business parameters of sales and service executives is significantly related to their knowledge

H₀6: Performance on business parameters of sales and service executive will not be significantly related to their on-the-job skills

H₁6: Performance on business parameters of sales and service executives is significantly related to their on-the-job skill
RESEARCH DESIGN

Selection of Research Methodology

The difficulties training professionals and their clients and critics have always had with measuring training benefits are that so many other factors are involved. Market conditions, new competition, product characteristics, sales incentives, swings in the economy, and seasonal consumer demands are just a few of the factors besides the training that could easily influence bottom-line results. Given that so many other factors interact with the performance outcomes that training is aimed at, it becomes nearly impossible to sort out the effect that training did, or did not have (Brinkerhoff, 2006).

Hence, the process of isolating the effects of learning and development is critical while evaluating the impact of training and development. In this step of the process, specific strategies are explored to determine the amount of output performance directly related to the training program. Specific strategies taken in this step will pinpoint the amount of improvement directly related to the program, resulting in increased accuracy and credibility of training impact evaluation. The concept of linking training with business results, though holding great potential cannot be brought to practice without experimental evidence which can lend weight to the theoretical inputs.
Yin (1987) clearly mentioned that case study is used as research strategy in many settings including organizational and management studies. Kirkpatrick (1996) while defining guidelines for measuring each of the levels advised use of control group to measure learning, behaviour and result level. Control groups are considered the “gold standard” when it comes to determining the effects of (training) interventions. For Verizon impact studies using pre-training and post-training measurements and control groups were conducted to link training investments with overall corporate performance (New Guard, 2001).

The full range of experimental science also includes those situations in which the experimenter cannot manipulate behaviour, but in which logic of experimental design may still be applied. These situations have been commonly regarded as ‘quasi-experimental’ situations (Blalock (1961); Campbell and Stanley (1966); Cook and Cambell (1979)).

Quasi-experimental research to test theory is a very common type of quantitative research in HRD and training because of the difficulties in creating true experiments in organizational settings. Quasi-experimental research uses existing situations in the field to study phenomena. It is used when it is impractical to conduct a true experiment or to study more variables than can be controlled in an experiment (Swanson and Holton, 2005).
This is exactly what the present study is trying to achieve, by employing quasi-experimental method towards evaluating the impact of training on key business performance parameters in real business environment. A control group arrangement is used to isolate learning's impact. With this strategy, one group participates in a program, but another, similar group does not. The difference in the performance of the two groups can be attributed to the program. When properly set up and implemented, the control group arrangement is the most effective way to isolate the effects of learning and development.

Thus, this study involves providing solid practical ground to an extremely potent concept and thereby assumes great significance in the present business scenario. This strategy will help training professionals to equip themselves for demonstration of benefits of training interventions and inspire business leader confidence in training. For the present study, the researcher has the task of

- Finding the pre-training and post-training scores for both the experimental group and control group on the following factors

  o Knowledge of sample subjects
  
  o On-the-job skill evaluation of sample subjects
  
  o On the job performance and results achieved
• Comparing the pre-training and post-training sets of scores for experimental group and control group in each case study independently

POPULATION

It is necessity to describe the experimental sample in terms of its attributes related to the experimental variables. The sample for this particular study was selected according to a set of criteria formulated keeping in mind the objectives of the experiment.

Criteria for Selection of Sample Subjects

For the purpose of this study, sample was selected at different levels. As the first step sample organizations were selected followed by selection of control and experimental group in each organization. The following criteria were considered for the selection of the sample:

• Selection of sample organization: Sample organizations were selected from amongst the service organizations in India, through simple random selection. Universe was a list of top 59 service organizations in NCR was taken from ET-500 list for the year 2003. Chits were made of all the names of these service organizations, and two sample organizations were selected randomly without
looking and without replacing. Two organizations, which were selected, were Bharti Televentures Limited and BSES Limited.

The sample subjects were purposefully selected from National Capital Region of Delhi. The main reason was that the investigator is settled in Delhi. This enables him to maintain close contact and exercise control over them.

Sample Size

The size of the sample was the next question to be attended to. Any research experiment that seeks to do justice to the nature of experimental research without compromising the external validity of findings has to be based on an acceptable sample size.

Organization sample: According to Yin (1987), for case studies to be generalized to theory, a theory must be tested through replications of the findings in a second or even a third neighbourhood, where theory has specified that the same results should occur. Once such replication has been made, the results might be accepted for a much larger number of similar neighbourhoods. Hence, number of organizations for study has been considered as two (more than one). Considering the practical aspects of study, which involved steps from getting permission from top management and buying-in at all levels of management, understanding of organization, creation of experimental group and control group, observation at target organizations through all steps of training cycle to
maintain the sanctity of process, and final observation is a time consuming process. In the given time frame, it was practically possible to complete this process for two sample organizations only.

Sample size of groups:

Sample size of groups has been explained in detail under 'Design and Implementation of the Instructional Experiment: Criteria and Procedure for Sampling'.

DATA COLLECTION AND ANALYSIS

This section includes the procedures followed in data collection, problems faced in data collection and procedure adopted for data analysis.

Data Collection

The data has been collected from both sources i.e. primary and secondary sources. Secondary sources of data including books and journals on training and service industry; internet has also been referred extensively for the purpose of this research. As part of review of existing research, available dissertations and theses at Association of Indian Universities, University of Delhi, Management Development Institute, Gurgaon and Aligarh Muslim University, Aligarh has been referred.
Primary data has been collected from use of evaluation tools (written and schedule observation) and using organization data for performance evaluation. Details of tools used, validity of tools and training of observers have been mentioned in subsequent sections.

**Data Analysis and Interpretation**

Each of the relevant questions, under the respective Hypotheses, has been tested by single factor ANOVA analysis. Data analysis and interpretation has been explained in detail under 'Design and Implementation of the Instructional Experiment: Data Analysis and Interpretation'.

**Tools Used in Present Study:**

The objective of the study is to evaluate the impact of training on business critical parameters of sales productivity and customer satisfaction scores. In addition, impact of training is also evaluated on intermediate results of employee knowledge and on-the-job skills. We are looking forward to objective and quantitative parameters; thus, it was decided by the investigator to focus on quantitative approach. The tools used by the investigator were:
• Written evaluation: Written evaluation is done to evaluate knowledge score of employees pre-training and post-training.

• Observation schedule: Observation was done to evaluate on-the-job skills of employees.

• Data analysis: Data analysis from respective organizations was done to analyse business results of sales productivity and customer satisfaction score.

Details of each tool are mentioned below.

**Validation of Tools**

Being a quasi-experimental research, existing situations in the field to study phenomena were used. In this research, we have attempted to use existing tools, process and methodologies to have internal and external validity. Following validity test were conducted:

*Internal validity:* The internal validity of an information-gathering effort is the extent to which it actually (correctly) answers the questions it claims to answer using the data that were gathered. All data collection and analysis is carried out in the context of a model, or set of assumptions, about the process being observed. In this study, internal process and tools already existed in both organizations to evaluate knowledge, skill and result. Same tools, process and data were used to ensure internal validity of information gathering.
**External Validity:** The external validity of an information-gathering effort is the extent to which answers based on the observations correctly generalize to other unobserved situations. Avoiding obstructive measures of observation as much as possible can increase external validity. In this study, no obstructive measures of observation or data collection were used, since, in both organizations all data is collected through existing processes.

**Frame of Reference:** In existing study, relative comparisons examine what would have occurred without the training intervention or possibly the differences between experimental and control group.

**Nested Factors:** The only way, the control group and experimental group differ in this study, was administration of training to experimental group. All other factors were same.

**Details of Tools**

Let us discuss each one of the tools used in this study in detail.

**Written evaluation**

A written evaluation is used for assessing a pre-selected area of knowledge and process, in an attempt to objectively measure the status of assessee. According to Blooms’ Taxonomy, evaluation on knowledge can be done at six levels of knowledge, comprehension, application, analysis, synthesis and evaluation.
Problems in written evaluation: When an evaluator is creating a written evaluation, he is creating a scenario for the student to be evaluated and student should be able to understand the situation objectively and respond to it. But this may not happen always, either due to a fault in the language of the questions framed or due to student understanding.

Let us discuss these conditions:

Ambiguity – As has already been pointed out earlier, clear-cut precise definition of what is to be evaluated is very essential. That is why; every all-possible areas of evaluation need to be listed. The evaluator has to be clear about the parameter to be evaluated, and questions should be framed accordingly. The question language should be clear and explicit, to ensure that each student understand a question in a similar manner and same context. The language of the questions should be exact and specific. If the items are in the form of diffused statements, different students can interpret them in different manners. In case of multiple-choice questions, the choices given should be explicitly different from one another and in line with the objective of evaluation.

Extent of student inference – The extent of inferential understanding made by the students or executives evaluated may differ on basis of question language, their own experience and knowledge. This will also be dependent on language skills of students. They need to understand and interpret the language.
Also, the use of jargons/technical language, may lead to different students interpreting the same question differently.

*Descriptions of areas to be evaluated* – How to describe areas to be evaluated is an unsettled problem and a major debatable issue. It is important to clearly define the areas to be evaluated, before creating the questions.

One, thus, has to strike a balance between the language of questions, generality of the categories of evaluation to obtain a reasonably comprehensive and statistically sound written evaluation tool.

**Written evaluation used in present study:** Written evaluation used in present study was for product and process knowledge evaluation. These evaluations were prepared for knowledge and comprehension level of ‘Bloom Taxanomy’. For purpose of objectivity and ease of administration, objective type questions were created for evaluation, minimizing the problems identified in written evaluation. These questions were tested on-line on learning management system (LMS) of respective organization.

**Observation schedule**

An observation schedule is used for recording pre-selected behaviours in an attempt to quantify behaviours in the situations being observed. There are many techniques used to observe and record human behaviour
and physical environments. They may be check-list, rating scales, narrative descriptions of interactive coding systems. Each of these techniques is appropriate for specific kinds of data to be collected.

Techniques might differ, but the following elements are common to all observation schedules:

- **A purpose** – The purpose of observation will guide the selection of the technique. Observation pertaining to sales and service professional is used for variety of purposes, such as:-
  
  - Evaluation of executive performance
  - Evaluation of quality of interaction with real life environment

- **A set of operational definitions** – Operational definitions are basically descriptions of behavioural manifestations. Unambiguous operational definitions guide the observer to be able to assign the correct value or category of every being observed.

- **A means to train observers** – It is essential for observers to learn the operational definitions and specific procedures for recording data. Without proper training of observers, it is not possible to ensure accuracy of information being recorded.

- **A focus** – Each observation has a focus phenomenon to be looked at or listened to. This may be an executive, a customer or some other variable in the environment.
• **A setting** – It is important in any observation to specify the setting or venue that is where exactly is the data to be obtained. It could be classroom, playground, work floor or recorded data. Obviously, the purpose will decide for the setting.

• **A unit of time** – The time frame of observation depends on the purpose and focus. The more extensive the observation system is, the more time it requires.

• **A plan for administration** – All observations need a schedule or a plan for gathering of data. This includes various aspects such as period of data collection, number of observers etc. The plan once decided on, should be strictly adhered to.

• **A method to record, process and analyse data** – The method of recording (tapes, slides, discs or paper-pencil) will affect how the data are processed. Systemic processing and categorization of recorded events is essential in order to draw worthwhile conclusions. Processing can be done by scanning (for tapes, slides or discs), key punching directly from records or hand sorting narratives. Analysis of observed data usually takes the form of frequency counts, percentage of occurrences, scores on rating scales, presence or absence of behaviours and qualitative statements.
Problems in observation

When an observer is observing a set of events occurring before him, he should be able to report them and draw conclusions from them accurately. But this may not happen always, either due to a fault in the observation instrument or due to some personal or environmental problem. Let us discuss the two conditions one by one:

(i) Faults in observation instrument

Ambiguity – As has already been pointed out earlier, clear-cut precise definition of what is to be observed is very essential. That is why; all behaviours listed in the observation schedule should match with the purpose of study. Apart from this, the variables to be observed have to be embedded in a strong theoretical framework. Otherwise, observer would not be clear as to why he has to observe what he is observing and whether he is observing what he has to observe. The language of the items should be exact and specific. If the items are in the form of diffused statements, different observers can interpret them in different manners.

Extent of observer inference – The extent of inferential judgment required of the observer differs according to the purpose of the study and nature of the observation schedule. Low inference observation normally requires recording the presence, absence or frequency of behaviours listed in the scale. Thus the observer,
basically just reports in a systemic manner what he sees. High inference measurement requires the observer integrate his or her impressions of behaviour into some kind of global assessment and assign a value to it. The observer, thus, judges the psychological characteristics or thought process of an individual on the basis of his behaviour. Low inference observation schedules are limited in scope and collect data on human behaviour in an extremely mechanical manner. High inference observation schedules, due to subjective influences, might suffer in validity and reliability and thus, give inaccurate statistical picture.

*Descriptions of behaviour* – How to describe human behaviour for measurement, or in other words, how to qualify human behaviour accurately is an unsettled problem and a major debatable issue in social science research. The main problem that one faces while assigning units in observation schedule is of achieving a fair amount of reliability and validity. A tool is said to be reliable if all observers observing the same event arrive at similar results.

Theoretically, one can obtain a high degree of reliability by using small easily observed and recorded units. This will lead to greater unanimity among all the observers and the scope of subjective interpretation would be minimized. But then, this kind of dissection of behaviours might lead to the behaviour being so reduced that it no longer bears much resemblance to the
composite behaviour that one intended to observe. Thus validity of
the observation system is lost. On the other hand, one can use
broad natural definitions of behaviours. In that case a high burden
of subjective interpretation is put on the observer, which might
lead to ambiguity and differences of opinion amongst observers,
resulting in loss of reliability. One, thus, has to strike a balance
between the generality of the categories of observation to obtain a
reasonably comprehensive and statistically sound observation
schedule.

(ii) Personal and Environmental Problems

The mental and emotional set-up of the observer – In behavioural
observation, this can be the cause of highly incorrect
measurements or inferences. An observer, who is disturbed or
upset on a particular day due to some personal problem, might be
unnecessarily strict in his judgment. Individual biases and
prejudices also affect his/her assessment negatively. In low
inference measurements this might not matter much but in case of
high inference measurement, this might give a distorted picture of
events. Inadequate knowledge of the observer in the concerned
area might also be a potent factor. So a researcher must always
exercise caution in this regard and give adequate time and thought
to the selection and training of observers.
**Presence of the observer** – In a teaching–learning situation, this is an important variable as it affects both the teacher and the pupils or trainer and the trainee. It is not uncommon to witness a class being unusually enthusiastic or unusually quite at the entrance of the observer. A trainer also may become more nervous or conscious, and might be unable to perform despite his/her having the potential. But this normally holds good in the initial stages only. Once the teacher/trainer has developed confidence and a good rapport with the pupils/trainee, and the trainees have become acclimatized to the presence of an un-obstructive observer, the effect of the observer as an influential stimulus is mostly nullified.

Rating scales are commonly used in the social sciences to identify degrees of particular behaviour or trait, when direct measurement is not possible. Normally rating scales are of following types:

- **Performance rating scales** – On these scales, judges classify performance of behaviours in terms of categories like poor, fair, good or excellence. These categories may be assigned numerical value for the purpose of statistical interpretation.

- **Attitude or opinion rating scales** – On these scales responses to statements on an issue are expressed using alternatives such as strongly agree, undecided or strongly disagree. Unlike performance
ratings, where the observer rates a performance explicitly, the rater in attitude testing is the person whose attitude is to be assessed.

A rating scale is a structured observation schedule. In case of rating scale, processing, quantification and recording of data can be easily done, accurate comparisons can be made and thus, generalizations can be achieved. The main disadvantage of a rating scale is that a summary of the observer's opinion is produced rather than actual observed events i.e. an observer has to integrate his impressions into some global assessment of a performance e.g. control, organization, sociability etc. of an executive. This might lead to what is called a 'halo' effect. The observer might gain an overall impression, which affects all his ratings of the performance, even if these ratings are supposed to reflect different criteria. The ratings in this case are a bit 'too consistent', as a result of artificial dependence amongst them.

The observation schedule used in the present study

As has been pointed out earlier, the observation schedule used in the present study by the investigator included quantitative description. For quantitative description, the rating scale was used. The rating scale used was the one used by the respective organizations to measure skills of their executives.
Items of the observation schedule

The items included in the observation instrument by the investigator as picked from respective organizations, were concerned with sales and customer service skills. A detailed description of these skills has been provided in this section.

Skills associated with effective selling

A skill is a well-defined capability of any kind, including intellectual, physical and artistic capabilities. A skill is also an “instructional or learning outcome involving some form of physical or motor performance which, an individual has learned with ease and perfection.”

For the purpose of selecting skills of effective sales and customer service executive in the observation schedule, the investigator went through an extensive collection of related literature and also consulted various experts and trainers in the field of sales and customer service. On the basis of theoretical input, collective opinion received and applicability on target group, the skill matrix was picked up as applicable in respective organization. The skills were broadly divided into the following categories:

- Selling skills
- Call centre - Customer service skills

Each one of the above is now discussed in detail:


*Selling Skills:* These are the basic skills, which any customer facing sales person should essentially possess, for performing reasonably well as sales professional. Raychem (1995) has defined selling skills.

For the purpose of this research, walk-in selling skills are considered. The key skills/behaviours accepted and prevalent at the respective organizations are listed as follows:

1. **Knowledge of products, services and process** – At the onset, the sales person has to understand for self and then subsequently make others understand the products and services s/he is selling, their application and benefits to customer. S/he also needs to be aware of organizational/legal processes required for the customer to follow, to purchase the product/service.

2. **Personal hygiene and grooming:** In sales environment, it is quite often said that the first impression is the last impression. Personal hygiene and grooming of sales professional is a key to make an impression on the prospective customer. This communicates an image of organization and of an executive to the prospective customer. The item pertaining to this skill given in the skill evaluation format is as follows:

   a. **1.i.** Was the FSO wearing Airtel uniform and badge

   b. **1.ii.** Was the executive groomed neatly and dressed smartly?
3. **Acknowledgement and opening**: Once the customer has walk-in the showroom, s/he wants to be attended promptly and in friendly manner. Once, customer’s presence is acknowledged, they want to be guided, where their requirements are met. The item pertaining to this skill given in the skill evaluation format is as follows:

   a. **2.a.** Did the FSO acknowledge the customer within first 5 minutes?

   b. **2.b.** Was the FSO warm and friendly and directed customer to concerned executive politely

   c. **2.c.** Is the executive able to open the call effectively

      i. Greet

      ii. Introduce self

      iii. Clarity and purpose of call

4. **Understand customer requirement/problem**: Each customer is unique and situations faced by each customer are unique in themselves. Hence, it is important to understand each customer situation, problem and emotions. Once, the problem is understood, then executive should explore options to resolve customer problem or escalate the problem, as required. The item pertaining to this skill given in the skill evaluation format is as follows:
a. **3a.** Did the FSO listen and understand the problem faced by the subscriber

   i. Effective listening with eye contact

   ii. Empathize with customer

   iii. Testing understanding

b. **3b.** Did the FSO Executive explore options and resolve the problem, If no,

   i. Did FSO executive note the customer details

   ii. Clearly communicate the action plan / escalation path

   iii. Given a firm commitment to resolve problem

   iv. Check customer understanding

5. **Demonstration and objection handling:** Customer buys any product or service only when it meets customer requirements. Hence, this is the skill of sales professional to demonstrate in a way that the product or service meets all customer requirements. All customer objections should also be held in positive manner, giving confidence to customer to make a purchase decisions. The item pertaining to this skill given in the skill evaluation format is as follows:

   a. **4a.** Did the FSO executive understand customer background and implied and explicit needs of mobility
i. Summarize and test understanding

b. 4b. Was the FSO executive able to effectively demonstrate / explain handset / 'AirTel service'

c. 4c. Did the FSO executive use FAQs to handle objections

6. **Selling options:** Once the customer has agreed to purchase, it is important to enhance the relationship with customer by offering other utilities which will add value to customer. These are called as value added services. This increases customer satisfaction and also adds revenue to the organization, without additional investment. The item pertaining to this skill given in the skill evaluation format is as follows:

a. 5a. Did the FSO executive understand the customer's requirement of VAS

b. 5b. Did the FSO executive attempt to introduce at least one 'value added service'

7. **Closing and documentation:** Closing of customer call is important. Neil Raychem (1984) demonstrated that effective closing increased success to get business. Hence, closing needs to be effective. The item pertaining to this skill given in the skill evaluation format is as follows:

a. 6a. Did the FSO Executive
i. Summarize commitment / action plan, if any (either from our side or from customer end)

ii. Check, if he requires any other support

iii. Thank customer for visiting FSO

b. 6b. Did the FSO Executive capture the detailed profile of the customer in the record book

Call Centre – Customer Service Skills:

These are the basic skills which any customer interacting call centre person should essentially possess, for performing reasonably well as a call centre professional. These skills are listed in ICMI (In-coming Call Centre Management Institute) Call Centre People Management Handbook and Study Guide (Cleaveland and Harns, 2004).

On telephonic call, a customer can't see the executive. He makes his perception of service on the basis of his telephonic interaction. This includes various parameters like accessibility of call centre, number of rings before telephone is answered, clarity of telephone line and interaction with executive. This makes skills required by call centre executives, a focus area. For the purpose of this research, call centre customer service skills are considered, as the target role for this study is call centre customer service executive. The key skills/behaviours accepted and prevalent at the target organization are listed as follows:
1) **Greeting** – With the greeting of executive customer forms the first impression about the organization and their executives. Greeting helps executive to gain customer confidence. The item pertaining to this skill given in the skill evaluation format is as follows:

a) 1.a. Was the opening as per the script?  
   (Greet customer, welcome to BSES, identify self, How may I help you?)

b) 1.b. Was the call opening clearly audible, and at an appropriate pace?  
   (was there a pause after greeting & the executive name was clearly understood)

2) **Language skills:** In audio environment, language skills of executive are important. The customer can’t see the body language; hence the message has to be communicated with appropriate language skills. The item pertaining to this skill given in the skill evaluation format is as follows:

a) 2.a. Did the executive capture the caller’s name and address?  
   (Did the executive use caller name at least once in call properly - use Mr./Ms.<full name> or Mr./Ms.<last name> or first name, if only first name is told by customer)

b) 2.b. Did the executive speak in simple language, easily understood by customer?
c) 2.c. Did the executive speak at an appropriate pace, with clarity, and appropriate tone modulation?

d) 2.d. Did the executive converse in the language customer is comfortable with?

(Use customer's language of interaction.)

3) **Active listening and understanding customer.** In service environment, it is important to understand customer issues and work for resolution, but it is critical to understand customer emotions and manage these emotions for customer to be satisfied. The item pertaining to this skill given in the skill evaluation format is as follows:

a) 3.a. Did the executive listen attentively & understand customer issue?

(No interruption/ avoid repeat questions/ Give verbal affirmations)

b) 3.b. Did the executive probe to check his understanding of customer issues?

(Ask focus/relevant questions to understand issue/query Paraphrase the customer requirement/issue)

c) 3.c. In case of gap in service, did the executive offer an apology with an explanation to customer?
(Do not justify, offer apology on behalf of BSES. If customer is open and complete details are available explain the reason for delay in the resolution)

4) **Resolution/Solution:** Customer calls the call centre in case of problem; s/he expects that once problem understood, this will trigger a resolution process within the organization. Either problem will be solved immediately or appropriate action will be taken and he will be informed appropriately. The item pertaining to this skill given in the skill evaluation format is as follows:

a) 4.a. Did the executive understood customer problem and provide relevant/complete/accurate solution & information to the customer?
(Solution relevant to customer query/issues Complete and accurate information in context to the prevailing policies/guidelines/process/charges)

5) **Hold procedure:** While performing role of call centre executive, it may be required to request the customer to hold the telephone line, while executive access information to provide service to customer. Since, the customer is on telephone, s/he does not know, what the executive is doing. This may lead to customer getting dissatisfied and unhappy. Thus, a proper hold procedure needs to be followed. The item
pertaining to this skill given in the skill evaluation format is as follows:

a) 5.a. Did the executive seek caller permission & give reason before placing customer on hold?

   (Inform caller the reason for hold and the estimated hold time)

b) 5.b. Did the executive came back to the caller within 30sec.

   (In case additional hold time is required, inform the customer within 30 seconds of estimated hold time executive should place customer on hold not more than twice in a call)

c) 5.c. Did the executive thank the customer for staying on line?

   (After coming back from hold officer should thank the caller for being on hold.)

6) **Call Close**: In any customer service interaction, call closing is critical. This helps to summarize the core issue and key action points. Closing gives confidence to customer, that his/her issue has been understood and clarity what action s/he should expect from the organization, and by when the issue will be resolved. The item pertaining to this skill given in the skill evaluation format is as follows:

a) 6.a. At end of the call, did the executive summarize the conversation?

   (Summarize key points covering customer concern/issue Resolution provided/resolution path)
b) 6.b. Did the executive seek if any further assistance is required by the caller and thanked the caller as per script? (executive should thank the caller for calling BSES and staying online)

7) **Overall courtesy:** It is difficult to capture overall impression of the call in any individual parameter. The item pertaining to this skill given in the skill evaluation format is as follows:

a) 7.a. Was the executive enthusiastic and polite throughout the call?
   (Polite, enthusiastic, full of energy, courteous, patient)

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**Result evaluation**

Result is recording pre-selected output measures in an attempt to quantify in the defined situations. This data can be collected from number of sources, which could be organizational records like financial book of accounts or sales figures, record of attendance, HR records, analysis of customer feedback, survey by third party etc. Type of source selected will depend on type of result to be evaluated and organizational systems to manage data.

Following are the elements of while evaluating result data:

- *A purpose* – The purpose of accessing the result data will guide the selection of the source to access. Result data is used for variety of
purposes, including evaluation of executive performance, evaluation of organizational performance, comparative analysis of results with competitor results, identification of area to be improved.

- **A set of result definitions** – Unambiguous result definitions guide the observer to be able to identify the correct value and classify the data in correct category for uniform analysis of results and derive meaningful analysis.

- **A unit of time** – The time frame for taking result data depends on the purpose and focus. Data may be derived for a week performance, month performance, quarterly performance or annual performance.

*Problems in result evaluation*

When an investigator is attempting to evaluate and analyse result data, he should be able to identify precise data and draw conclusions from them accurately. But this may not happen always. One of the key gaps is a fault in the data capture process. Let us discuss the various aspects:

(i) **Faults in data capture process**

*Ambiguity* – As has already been pointed out earlier, clear-cut precise definition of what is to be evaluated is very essential. That
is why; every result to be evaluated should match with the purpose of study. Apart from this, the variables to be evaluated have to be embedded in a strong theoretical framework. Otherwise, investigator would not be clear as to why he has to collecting data what he is collecting. The language of the items should be exact and specific. If the items are of diffused statements, different observers can interpret them in different manners.

**Process of data collection** – The extent, of which the result data will be free from inferential judgment, will depend on the process of data collection. Any new parameter of result introduce, lead to multiple interpretations of definitions and reporting of data. There has to be defined process and common understanding, which lead to common reporting of data.

*The result evaluation tools used in the present study*

The result evaluation used in this study is objective and quantitative. For the purpose of consistency and common understanding of result evaluation process, continuity of data collection and analysis already prevalent in organization is considered. The result data collected and analysed pertain to two areas of sales results and customer satisfaction results.
Sales results data is analysed and collected for unit performance on monthly basis. Since, sales is dependent on number of factors, which are beyond the scope of this study, hence a running average of three months is taken for statistical analysis. To remove any discrepancy on account on unit size, productivity per person per month is calculated.

Customer satisfaction score data in the present study has been taken from 'Instant Customer Engagement' system already in use at the organization. This system gives an opportunity to customer to record their feedback on the call centre executive immediately after the call. This ensures that customer reaction is immediately captured. Since the objective of experiment was to enhance customer satisfaction scores, hence, the score of number of customer answered in top two boxes of '4 and 5' was considered. For the purpose of analysis and equivalence, the percentage of customers who have rated the call in top two boxes was considered.

**Design and Implementation of the Instructional Experiment**

The present study is based upon pre test – post test design using two parallel groups of sample subjects viz- the experimental and the control group. Two such experiments were conducted, to test the hypothesis for two different organizations in service industry. The entire study was conceived and implemented as depicted in the following steps:
• Selection of sample organizations
  o Formation of experimental group and control group

• Selection and training of observers

• Development of training methodology and training content

• Initial evaluation of groups
  o Establishment of equivalence of control group and experimental group

• Administration of training
  o Experimental group undergoes training
  o Control group does not undergoes any training

• Final evaluation of groups

• Analysis and interpretation of results

• Drawing of Conclusions

The details of the aforementioned steps of the entire instructional experiment are described in the forthcoming sections.
SELECTION OF SAMPLE ORGANIZATION

Criteria and Procedure for Sampling

Criteria and procedure for selection of organization has already been explained in detail in research procedure, under population. Once the organizations were selected, next step was to select the control group and experimental group in each organization. The details of sampling procedure and sample size for selection of control group and experimental group in each organization are given below

Sample size of groups: An attempt was made by the investigator to motivate the management of two selected organizations for appropriate sample size. The details of sample size are given below:

- **Bharti Televentures Limited**: Showroom executives from Bharti Televentures Limited were taken as sample. Out of total of seven zones, two zones were selected as experimental group through simple random sampling and one showroom per zone was selected as control group through simple random sampling. All showrooms executives of two zones (57 executives) were taken as experimental group. One showroom from each of balance five zones comprising 26 executives were taken as control group.

- **BSES**: Call centre executives from BSES call centre were taken as sample. BSES Rajdhani Private Limited (BRPL) and BSES Yamuna Private Limited (BYPL), BRPL has been selected for this study by
simple random sampling (draw of lots). All call center executives working with BRPL has been selected as universe; of the universe of 50 executives with four supervisors in BRPL, all executives working with two supervisors are selected as experimental group through simple random sampling and other two supervisors are taken as control group. Two supervisors with 24 executives were taken as experimental group and other two supervisors with 26 executives were taken as control group.

**Formation of Experimental and Control Group**

The allotment of sample subjects to the two groups, experimental and control group was done through simple random selection. The sample group was quite homogenous from the role performed in both organizations. Since, the allotment of sample subjects was done through random selection; the groups were not subjected to treatment on their gender, age, qualification or experience. Details of allotment of sample subjects from both organizations into experimental and control group are explained in respective case studies.

**Selection and training of observers in the present study**

The nature of this particular research study demanded that the sample subject and customer reactions be observed in their natural setting i.e. in their respective work place. In order to observe, the investigator, along
with representative of respective organizations, visited every location and observed the sample subject in un-obstructive manner. A common understanding was reached between investigator and representative of respective organization on details of each item through discussion.

**Development of training methodology and training content**

As part of experiment setting, training methodology and training content for each of the sample subject was decided by training department of respective organizations. The investigator was part of both the teams as an observer to ensure the following:

- Specific objectives were formulated for each training intervention
- Identification and definition of experimental and control group
- Training methodology was defined for each training intervention
- A structured training content is designed for each training intervention
- Training of trainers is conducted to ensure that training delivery is in line with training objectives and training content
- A process is set-up to capture the desired intermittent and final results of training
- Experimental group and control group are clearly segregated, so that there is no training intervention for the control group
Establishment of Equivalence of Experimental and Control Group

The groups were divided through random sampling. For the purpose of knowing the experimental and the control groups are equivalent or not, test of equivalence was conducted between experimental group and control group in case of both experiments. Test of equivalence was conducted on knowledge scores, skill evaluation scores and business result of each group. These groups were equivalent with respect to role performed by them in their respective organizations, and their responsibilities.

Data Collection

For clarifying the procedure of data collection, it is important to describe the working pattern of sample subject in both organizations. The details of data collected for each sample subject is given below:

*Bharti Televentures Limited:*

- Role of sample subject: Showroom executive
- *Intermediate results to be evaluated:*
  - *Knowledge score:* Knowledge score is evaluated through an on-line test on product, process and tariff knowledge of executives pre-training and post-training. This test is done
on learning management system. A total of 60 questions were given to each executive. This test was administered at central location. Pre-training test was conducted in Nov 2003 and post-training test was conducted in April 2004.

- **Skill evaluation score**: Skill evaluation of executives was conducted on defined skill evaluation parameters, defined and accepted at the organization. Each individual was observed on these parameters and rated jointly by the investigator and organizational representative. These evaluations are done on their work place with real customers. To ensure that skills are evaluated objectively, and there are no abrasions due to customer behaviour, minimum 4 customer interactions over a period of 1 hour are observed. This observation was done in an unobstructive manner. The observation was done over a period of 2 weeks. Pre-training observation for all executives was completed before the start of training intervention (Oct, 2003) and post-training observation was done after the completion of training intervention (April, 2004).

- **Final results to be evaluated**: Final objective of this training intervention is to increase sales. Sale in a showroom is the result of various factors like showroom ambiance, marketing effort, customer footfall, customer satisfaction with previous visit etc.
Hence, a sale is taken as showroom performance. Also, sale is highly dependent on variable factors like schemes and competitor activity. To bring equivalence on market dynamics, a running average of three months is calculated. To bring equivalence between small and big showrooms, per person productivity per month is calculated for analysis purposes.

**BSES:**

- **Role of sample subject:** Call Centre Executive

- **Intermediate results to be evaluated:**
  
  - **Knowledge score:** In this case since the training included customer handling skills, knowledge is evaluated pre-training and immediately after training through role-plays. Two role-plays are evaluated by investigator and organizational representative for each person and average percentage scores are taken as knowledge scores. Role-play evaluation was done on skill evaluation template, used and accepted by BSES.

  - **Skill evaluation score:** Skill evaluation of executives was conducted on defined skill evaluation parameters, defined and accepted at the organization. Each individual was observed on these parameters and rated jointly by the investigator and organizational representative. These
evaluations are done on their work place with real customers. To ensure that skills are evaluated objectively, and there are no abrasions due to customer behaviour, minimum 3 calls were observed and final scores were calculated. This observation was done in an un-obstructive manner, by listening to live calls through a parallel connection and executives were not aware of this. The observation was done over a period of 1 week. Pre-training observation for all executives was completed before the start of training intervention (Sept, 2005) and post-training observation was done after the completion of training intervention (Feb, 2006)

- **Final results to be evaluated:** Final objective of this training intervention is to enhance customer satisfaction. Business results were evaluated in terms of customer satisfaction score, measured through percentage of customers have rated the interaction with executive as very good or excellent on a ‘5’ point scale. This is also called at BSES as score of ‘top two boxes’ to measure customer delight. Customer satisfaction scores were provided by BSES, through their tracking software. Since, customer satisfaction may also be impacted by number of attributes, not only on an interaction with executive, one week data of customer responses has been taken for this study.
Data Analysis and Interpretation

Importance of Analysis and Interpretation

Any experimental research yields a lot of data, which more often than not confuses the researcher. However, a pre-planned scheme of data analysis helps to give the data the needed organization so that its message can be easily read.

Analysis means the categorizing, ordering, manipulating and summarizing of data to obtain answers to research questions. It serves the following purposes:-

- It reduces data to intelligent form
- It provides a layout of the data for proper interpretation

Various statisticians and theoreticians on educational research are unanimous in the opinion that the scheme of statistical analysis of any data should do justice to the nature of data, the objective of the study and the prevalent traditions of analysis in the related area of research. Only then can one expect to achieve correct and error-free interpretation. Besides, interpretation means taking the results of analysis, making inferences pertinent to the research relations studied, and drawing conclusions about these relations. The purpose of interpretation of research results is to provide them meaning and finding out their implications. This can be done in the following two ways:-
The relations within the research study and its data are interpreted. This is the narrower and more frequent use of interpretation and is closely tuned with analysis.

The broader connotation of the research data is sought. This is done by comparing the present results and inferences with theory and with other research results. This is done because it is important to weigh one's result against demand and expectations of theory and conclusions drawn by other related researches.

The ultimate aim of any research is to extend sample based generalizations to the populations from which the sample is drawn. In order that this may be carried out satisfactorily, detailed analysis and interpretation of broad trends is a must.

**Scheme of Statistical Data Analysis**

The data related to this study has been treated at the following levels:

- *Sample statistics* in the form of calculation and discussion of measures of central tendencies (mean) and dispersion (standard deviation)

- *Inferential statistics* in the form of t-test to study the nature of differences in the distribution of the variable

- *Graphical representation* in the form of bar graphs of the means of various sets of scores
List of abbreviations:

Following is the key to various letter abbreviations and symbols in all tables throughout this and subsequent chapters:

EG: Experimental group
CG: Control group
\( \sigma \): Standard Deviation
D: Difference between two means (M1-M2)
\( \gamma \): Coefficient of correlation
t: t-ratio

Grouping of Analysis Criteria

It would be appropriate to explain the rationale of grouping of analysis criteria. These analyses are conducted for each case study independently, to evaluate the hypotheses in each case.

- **Pre-training comparison of experimental group vs control group**: Pre-training comparison of experimental group vs control group was conducted to evaluate equivalence between experimental group and control group in terms of their knowledge scores, on-the-job skill evaluation scores and business results. This will ensure that the two groups are starting from a similar base line. This will also give credence to post-training comparisons. A t-test is conducted to evaluate if the difference between the groups is significant.
• **Post-training comparison of experimental group vs control group:** Post-training comparison of experimental group vs control group was conducted to evaluate the difference in knowledge scores, on-the-job skill evaluation scores and business results between two groups. Difference of means between two groups is calculated, to evaluate if there is difference in the respective scores of two groups.

• **Pre-training vs post training comparison for control group:** Pre-training and post-training scores are measured and a comparison is done to evaluate, if the difference in pre-training and post-training scores is statistically significant. This comparison is done for parameters of knowledge scores, on-the-job skill evaluation scores and business results. This helps to establish if change in scores is significant even without training.

• **Pre-training vs post training comparison for experimental group:** Pre-training and post-training are measured and a comparison is done to evaluate, if the difference in pre-training and post-training scores is statistically significant. This comparison is done for parameters of knowledge scores, on-the-job skill evaluation scores and business results. This helps to establish if change is significant and can be attributed to training.

• **Correlation between knowledge scores and on-the-job skill evaluation scores:** Correlation between knowledge scores and on-
the-job skill evaluation scores was calculated, to evaluate if change in one parameter leads to change in other parameter. This will help to establish cause-effect relationship between change in knowledge of employee and change in on-the-job skill of employee.

- **Correlation between knowledge scores and business results**
  Correlation between knowledge scores and business results was calculated, to evaluate if change in one parameter leads to change in other parameter. This will help to establish cause-effect relationship between change in knowledge of employee and change in business results.

- **Correlation between on-the-job skill evaluation scores and business results:** Correlation between on-the-job skill evaluation scores and business results was calculated, to evaluate if change in one parameter leads to change in other parameter. This will help to establish cause-effect relationship between change in on-the-job skill of employee and business results.

An important consideration in any experimental research is whether the means obtained from the sample also describes the estimated population means from which the sample has been taken. We need to find some basis for believing that the sample mean (statistic) does not deviate very far from the population mean (parameter). The statistic that inform us of extend of deviation is called the standard error of the mean. In the
similar manner we can also find the standard error of the differences between means, which is more practical statistic for the purpose. It is also worthwhile to describe the rationale of the statistical analysis used for determining whether or not the mean differences between the groups are significant. Guilford (1956) is very emphatic about correcting the standard error of mean differences in terms of coefficient of correlation between two sets of scores when the sample groups are correlated. In view of the relatively large number of factors which influence one’s selling and customer service skills and use of training strategies and impossibility of identifying and controlling all these factors, the means of knowledge score, skill evaluation score and business result score were treated as correlated. There is a theoretical possibility that some of these factors exercise some overt or covert influence on performance of a particular criterion. Therefore, the t-ratios were calculated after providing for the correlation existing between the two sets of scores.

**Evaluation of Null Hypotheses**

Keeping in mind the objectives of study, following null hypothesis are formulated:

$H_{o1}$: Training will not impact the knowledge of sales and service executives in service industry

$H_{o2}$: Training will not impact on-the-job skill of sales and service executives in service industry
**H₀₃:** Training will not impact business performance of sales and service executives in service industry

To test null hypotheses 1, 2 and 3, comparison between pre-training and post-training data for control group and experimental group was conducted. Difference of means and standard deviation was calculated. t-test was conducted to evaluate if the shift in pre-training and post-training scores is statistically significant at 99% significance (0.01) level. This analysis was conducted for knowledge scores, on job skill evaluation scores and business performance parameters of executive.

Value of t is calculated using formula:

\[ t = \frac{(M₁ - M₂)}{\sqrt{\left(\frac{(σ₁σ₁)/(n₁-1)}{n₁}\right) + \left(\frac{(σ₂σ₂)/(n₂-1)}{n₂}\right)}* (1-(\gamma\gamma))} \]

**H₀₄:** On-the-job skills of sales and service executive will not be significantly related to their knowledge

**H₀₅:** Performance on business parameters of sales and service executive will not be significantly related to their knowledge

**H₀₆:** Performance on business parameters of sales and service executive will not be significantly related to their on-the-job skills

To test null hypotheses 4, 5 and 6, correlation between two factors was calculated. Probable error was calculated using following formula:

\[ P.E.\gamma = 0.6745 ((1-(\gamma\gamma))/\sqrt{n}) \]
Comparison of correlation and probable error was conducted. If value of $y > 6 \text{ P.E.}$, the correlation between two factors was considered as statistically significant.

**Reliability of Data**

The primary data collected are considered as quite reliable because these have been collected by using tools, for which internal and external validity has already been established.

To establish internal validity, data has been collected using tools and processes already existing in respective organizations. To ensure external validity, no obstructive measures of observation or data collection were used. Hence, observations can be correctly generalize to other unobserved situations.

**Dependability of Results:**

As the present research has been conducted in an honest manner, for academic purpose only; for the purpose of this study control group and experimental groups are established. This has helped to establish frame of reference in the existing study, wherein relative comparisons examine what would have occurred without the training intervention or possibly the differences between experimental and control group.
The only way, the control group and experimental group differ in this study, was administration of training to experimental group, all other factors being same. Hence, impact of other factors has been neutralized.

**Difficulties faced**

The main difficulty faced in the process of data collection, was to convince the prospective organizations to allow the investigator to conduct this study, where employees performing same role will be divided in control group and experimental group and why all population should not be given training together.

Another major difficulty was faced while dealing with training teams in respective organizations; training teams were apprehensive that their performance will be evaluated through this exercise and if results are not found to be positive, action may be taken against them. This difficulty was overcome by clearly stating that the study has been done as an academic exercise and same was assured by respective managements.

**Limitations of the Study**

Evaluating the impact of training on key performance parameters is a vast area of study. But an experimental investigation needs a specific theme, with well defined samples and tools. The study is thus, being delimited to service industry. The sample consists of executives
performing sales and customer service role in service industry. The focus has been kept on sales and customer service roles, because the investigator has experience in sales and customer service and would find it more convenient to understand and study the impact of training.

Considering the practical aspects of study, which involved steps from getting permission from top management and buying-in at all levels of management, understanding of organization, creation of experimental group and control group, observation at respective organization through all steps of training cycle to maintain the sanctity of process, and final observation is a time consuming process. In the given time frame, it was practically possible to complete this process for two sample organizations only.

Target group has been taken as customer facing executives, as executives at different hierarchy require different sets of competencies. So, taking them together would mean dilution of focus. Thus for the sake of comprehensiveness, roles of sales and customer service executives in service industry are included in sample. The study was conducted within National Capital Region of Delhi.

Since, the methodology adopted was quasi-experimental research and this study was conducted in real business environment, where there were issues of manpower attrition and participants from experimental group missing training due to various reasons (25% absenteeism in
classroom attendance for refresher training), impact of these factors could not be evaluated.

Study has been focused on evaluating, if there is an impact of training on business critical parameter of sales and customer satisfaction. However, this study has not focused on evaluating the impact and accuracy of different steps in training cycle, like training need analysis, training content, methodology chosen or training delivery.

Scope of Further Study

However, despite the above limitations, the data collected are considered quite reliable and dependable. It is hoped that the analysis and findings of the present study will enhance the scope of further research work on the subject.

Conclusion

This chapter has covered an important area of research, wherein the investigator has described the various tools and methods of investigation, justified their choice and also explained in detail their construction, their merits and demerits, the theoretical principles and process behind their construction. These elaborations have contributed to the clarity and substance of the research report because of a proper understanding of
tools and methods is indispensable for the success of a research project and writing of a good research report.