CHAPTER III

RESEARCH METHODOLOGY

3.1 Research

Research is a process to acquire skills and knowledge for new and different knowledge based outcomes. New concepts are made with the help of existing data from journals, books, articles, magazines and internet. New understandings can be made out of relevant data and present study.¹

Doubts lead to inquiry and inquiry leads search or investigation. Research is a voyage of discovering new ideas and concepts to verify knowledge in any branch. Research is to find new answers to questions through scientific methods.

As per the Advanced Learner Dictionary’s of Current English “A careful investigation or inquiry especially through search for new facts in any knowledge branch is research”

According to Clifford woody “Research comprises defining and redefining problems, formulating hypothesis or suggested solutions, collection, organisation and evaluation of data and reaching conclusion to determine whether they fit the formulating hypothesis or not”.

As per D. Slazenger and M. Stephenson “Manipulation of things, concepts or symbols for the purpose of generalizing to extend, correct or verify knowledge, whether the knowledge aids in construction of theory or not is research.”²

Research first step is to search an area where investigation and findings will explore new ideas. Then review of literature is done for detailed and conceptual knowledge. What, when, where and why are the questions to study and finally new insights of study will be analysed
with the help of available data. Evaluations are made and finally new conclusion will be more conceptual and practical with respect to subject area. Steps of research include search of relevant information, review of data and evaluation of data.

First step of research is to find relevant information and collection of related articles. Analyze the collected information to get broader idea about the subject. Evaluation is done after review of data and evaluation provide new understandings and new outcomes with the help of tests.³

Research in cement industry is a process of investigation. This research will help to understand the present scenario of cement industry as well as to make people aware about cement sector also. Research in cement industry with specific training objectives and data will explore new concepts of the study.

This research is about training program in cement industries, training methods, its problems as well as study of selected players of cement industry. Employee views about training, effect of training on their skills, training needs, its importance, training process as well as training outcomes too.
3.2 Review of Literature

Review of literature is a view or search on a subject with the help of published data. It gives an idea to reader about the work done on the subject and what new things can be done with that.

Analysis of a problem and its outcome gives an insight about the subject. Articles used in this review are from professional journals so that one can rely or trust that author and conclusion should be appropriate also.

Literature review means studying the subject with relevant information about the subject area. It increases knowledge and widens thinking about that subject. This is based on secondary data and not related to new experiments or original data.

**Article reviewed from different journals have been cited here.**

Salah Banna in his article *"Face to Face training is still the better choice over digital lessons”* opined that in this digital era communication becomes easy, convenient and cheaper and this enables employees to work remotely from their work station. Online training has its benefits but still face to face training is much more beneficial in terms of understanding, social linkage and interaction with experts. Face to face interaction helps employees to settle in workplace and easily grasp the trainer ideas as compared to digital training. Digital training needs I.T person supervision and proper voice and video quality which sometime got disturbed too and connection between trainee and trainer failed. So it concludes that face to face training is a better choice than digital lessons.⁴

Debbie Sorkin in his article *“How to make time for training and career development”* describes that staff development should also be considered as a prime job to management. Top management should be serious on training and development sessions of employees as it
directly affects performance of employees and productivity of company. Organisation should follow employee training need for future improvement in training sessions. Time should be given by management to employees for best results with the help of training and development sessions.\(^5\)

Kumari Neeraj in her article “Effectiveness of Training Process” states that training program is an investment on employees to prosper and develop careers by the organization. By training company achieve highly skilled workforce which further yields positive results in competitive market. Author says that effectiveness of training is must as it analyzes employee reaction, learning, performance and satisfaction level etc. An action plan should be prepared just after training to analyze the reaction, learning, behavior and effectiveness of training program.\(^6\)

Rachel Emma Silverman in his article “So much training, so little to show for it” describes that organisations invest in training program but does not properly evaluate the programs. The first step organisation should do is to have a proper training need assessment process. After implementation of program, the reaction of employees should be considered seriously. Companies show little concern in evaluation of training and later on this becomes the main cause of not achieving desired results. Companies should have best training practices and provide employees a proper method of evaluation after training program.\(^7\)

TJinsite in the survey “On-the-job training boosts employee morale: survey” states that around 40% of employees of different companies claimed for increase in productivity by training program. Around 35% employees find that employee morale got increased through training sessions. In this survey employees are in favour of On the job training and find it useful for enhancing skills and learning. Employees claimed for retention of employees through training program too.\(^8\)
Daniel in his article “Effective training can offer significant bottom line benefits” defined that by providing training to employees companies can increase their revenues to a significant level. He says employees were afraid of interacting someone but with the help of training they like to interact their customers now, so training program results in employee behavioural skills and company sales both. By training not only confidence but motivation, communication skills and leadership qualities can be enhanced too.\(^9\)

Khurana Sharma in his article “Train—not drain them” states that employees need training on proper subject, one should not feed them the learning which is not related or in which they are not interested. It is totally a management decision to do the training need analysis strongly for proper implementation of training program. Organisations should follow a step by step theory for evaluation of training. Firstly take feedback from all employees and prepare action plan for the next couple of months. Management must go for evaluation and provide direction to employees where they have reached and what are they still left with. By this employees will know where they are now and what is still to be achieved by them.\(^10\)

Dr G Ramesh, N Akbar Jan in the article “Deriving best results from team through leadership training” provides trainees an insight to leadership traits to reach the pinnacle. One can have best results if proper training, leadership and motivation are mixed. Leadership is to lead over a subject by knowledge, innovation, skill, capabilities or by capacity to get the best of specified area. A team would be more powerful if its leader is an expert. So training a team would be more fruitful through leadership qualities. If leaders are trained properly, their subordinates will definitely work in proper direction.\(^11\)

Ann P. Bartel in his article “Formal Employee Training Programs and Their Impact” finds that organisations introduce formal training to fill vacancies by internal promotions. Formal
training program boosts employees to perform better at workplace for further promotions. Formal training positively affects company’s productivity and efficiency. Impact of formal training program yields positive results in terms of employee knowledge and skills.\textsuperscript{12}

Manishankar Chakraborty in his article “\textit{A face lift to management training}” highlights about management training that has gone for tremendous change to accept new and global practices with a change of time. It is very important now to adopt change management. One has to act as per the flow, means to imbibe new practices of training program. Training is significant for survival in competition of business world.\textsuperscript{13}

Diane Wei Liang, Richard Moreland, Linda Argote in the article “\textit{Group versus Individual Training and Group Performance}” opined that group training enhances group performance of employees. Individual training has its own benefits related to individuals while group training enhances individual capabilities as well as group performance both. When certain knowledge needs to be shared among all employees, group training is of course an easy way to teach everyone.\textsuperscript{14}

Ann P. Barte in his article “\textit{Productivity Gains from the Implementation of Employee Training Programs}” states that labour productivity in 1983 was below their expectations but later on company implemented new training program and that yield positive results. That training program resulted in increased labour productivity and growth associated with organisation. It concludes that labour productivity increased by training program but that program was only specific for that area. This suggests that training programs results better if training implementation is done properly and imparted to employees efficiently.\textsuperscript{15}

Jeffrey D. Wilke in his article “\textit{The importance of employee training}” opined that training is very much essential for companies for further growth in technology, productivity, and for
survival in globalization era. Training is purposeful only if it produces value for company. Employees can enhance their skills and subject knowledge by expert guidance in training sessions and can improve themselves through training.\(^\text{16}\)

Jitha G Nair in his article “Cross cultural training” states that cultural adjustment is considered must for growth of employees and for organisation too. This article tries to discover a theoretical framework on cultural adjustment and its relevance for growth of organisation. Cultural training is useful for managing work force diversity in an organisation. It helps employees to create strong bonding and increase team work among employees.\(^\text{17}\)

Anil Mital, Anoop Desai, Anubhav Mital, Anand Subramanian in the article “The cost of not training” states that companies have to pay in many ways by not conducting training programs. Training assist employees in terms of increased productivity and efficiency. For technological enhancement training is must for organisations. Implementation of training does not guarantee improved performance and efficiency. Lack of training increase technological unawareness, decreased employee morale, less productivity etc. Companies have to pay a big cost for not implementing training sessions in organisation.\(^\text{18}\)

Marcel R. Van Der Klink, Jan N. Streumer in their article “Explaining the (In) effectiveness of on-the-job training” opined that effectiveness of training does not mean that On the job training will always be fruitful. Survey was done in an organisation and pre-test and post test were analysed. It was found that On the job training was partially effective. On the job training is preferred by management but does not guarantee for successful implementation of training programs. Study showed that On the job training helps to achieve desired goals and this indicates the success of program.\(^\text{19}\)
Shrinivasa in his article “On the Job Training” states that On the job training is useful for employees as they can learn new things simultaneously doing their own job. It gives a new exposure of responsibilities to handle and understand complex situations too. On the job training increases work pressure to employees of an organisation. Employees got tired of training program and at times could not met desired results also.20

Doug Harward in his article “New era of personal learning is transforming the training industry” discussed that employees, customers and anyone can learn through technologies, search engines, websites etc. With the help of internet, learning becomes easy for everyone. This learning by themselves transforming the training industry. So now companies are creating places for personal learning which means training by own. Libraries, e-libraries, web portals can assist learning to company employees.21

Jerry Shaw in the article “Effects of training on employee performance” opined that well trained employees give better results and outputs in an organisation. By providing training to employees can ultimately results in better performance and productivity. Organisations should take care about proper training need analysis and proper implementation of training program. Employee will perform better at workplace and this result in desired output for companies.22

Aimee Charest in the article “Training ideas” states that companies should also provide training as per the need of employees. Companies should start training cells and training departments which are needed by employees. By this employee will aware about their training need and can opt training session accordingly. This will help employees as well as companies for further growth opportunities.23

Lacey Halpern in his article “Importance of Training on Employee Retention” opined that investments done on training and developments yields high productivity and helps employee
retention too. He states that there are companies which during their hard time did not go for cutting budgets but invested more in training and development. This results in increased productivity and that companies not only survived but came again with a boom in industry.\textsuperscript{24}

B Janakiram in his book “\textit{Training and development}” defined training program, its technique, training process, development through training and case studies. It describes training is a continuous process of improvement of skills, knowledge, creativity etc. Human evolution is a part of training as Stone Age man got training by themselves or by their elders to fulfil their daily needs. Overall book states that training is necessary for all phases of life and essential for every employee of organisation.\textsuperscript{25}

Lorri Freifeld in his article “\textit{Online vs. in class success}” opined that online training is fruitful if delivered to employees in proper manner. Online training and class study both have their own merits and demerits. Some facts should be taken into consideration for online training that the content and study material should be enough to satisfy employees. I.T. department supervision is needed at every step as e-training is totally based on online study. So overall online training can be an alternate to classroom training if delivered properly and desired goals and output are achieved.\textsuperscript{26}

Harold Jarche in his article “\textit{An organisational knowledge sharing framework}” states that company should be proactive in training need assessment and to capture knowledge with expert guidance. Experts and trainers share their knowledge by conducting training sessions to employees. It is organisation’s duty to invest and maintain knowledge sharing platform for all employees of company for further enhancements of skills and learning through training programs.\textsuperscript{27}
Kevin Young in his article “Young people need to be given the right skills for success” describes the importance of training program for organisations. He says employees should be provided the required material and tools to enhance knowledge and skills, this makes employee to meet company’s expectations also. Employees should be provided the required material but in that direction where it is needed not in other way where the investment is totally a wastage of time.28

G Pandu Naik in his book “Training and Development” states about training and development of employees in an industry. It describes that training is a process to develop human skills and capabilities. It could be both short term and long term training. Training can be given at work place known as On the job training, inside the company and other one is Off the job training, outside the workplace. Both training techniques have their own merits and demerits. Overall training is significant for employees and organisation but proper implementation of training program is the success key.29

Josh Bersin Influencer in his article “Corporate training: It’s hot again” states that corporate training is now in demand. Organisations have their own or hired experts to enhance employee skills and learning. Now organisations invest in training and development program for employee growth. Employee now have a great interest in training sessions as these include games, role play, case studies which engage employees and entertain them with training programs. Trainers are advised to make training sessions more interactive for employees. Now a day’s company spend more on training program as it yields positive results for organisation.30
3.3 Research Gap

It has been found that there are certain issues in cement industry which are not addressed such as effectiveness of training program in cement industry and impact of training on employee skills with respect to training methods and different age groups. Therefore, the proposed research has been carried out to fill the gap and improve employee training program in cement industry.

3.4 Justification and Relevance of Study

Training is presently the most invested program of organisations. Companies invest highly on employee training programs for effective growth and development but still do not achieve desired results. This study will help to make training program effective in cement companies. This study analyzes the impact of training program with respect to different training methods and age groups to find new concepts in cement industry. This creates a need to study training programs in cement sector too.

This study in cement industry will help cement companies and employees to understand the importance of training programs and its relevance for further growth in cement sector. Present study is concerned with effectiveness of training program in cement industry and impact of training on employee skills with respect to training methods and different age groups.
3.5 Statement of the Problem

“A Study on Employee Training Program in Cement Industry in Rajasthan”

This research problem arises after the review of literature, discussion with employees of cement industry and guidance of experts. The study aimed to analyze the effectiveness of training program and its impact on employee skills with training methods and different age groups. Due to resource constraint four companies have been taken geographically as Ultratech cement, Shree cement, Wonder cement, J.K cement.

3.6 Scope of the study

The study is undertaken to analyse the present employee training program in cement industry. This study include training effectiveness, access the need of training program, analyze the methods of training program in cement industry and to analyze the opinion of employees regarding training program in companies.

Research is exploratory and descriptive both in nature. Exploratory research assists to find the best research design, a way to data collection method, and selection of area wise subjects. When problem arises and is in complex situation, in that case exploratory research comes into study. It means to explore new things, new solution of a problem. It means to find new phenomena of a complex problem with acquisition of knowledge and new concepts.

Exploratory research helps to gain new concepts of finding and resolving problems regarding employee training program in cement industries. One can explore new things with the help of present data on internet which is easily available for all readers.
This research uses secondary data also for final conclusion and for analysing the complex situations. Descriptive research analyse the current training program in selected cement companies and exploratory research will help to find new insights of the study.

Both exploratory and descriptive research helps to analyse the present scenario of training program, training need assessment and desired training methods by employees of cement industries.

3.7 Objectives of the Study

Every research is done for a specific purpose. The purpose or intention for this study is to find answers of certain queries with the help of certain procedures and scientific tests. The following are the objectives of research:

- To study the methods of Training Program in cement companies.
- To determine the impact of Training Program on employee skills with training methods.
- To study the opinion of employees regarding effectiveness of training program in cement industry.
- To determine the effect of Training Program on employee skills with different age groups.
- To find out areas of improvement of employee training program in cement companies.
3.8 Hypotheses

A hypothesis is a statement or assumption made to fulfill specific objectives or search. Hypotheses are framed to be proved or disproved by applying certain scientific methods. Hypotheses for the research are framed as:

**Hypothesis 1**

H1₀: There is no significant difference amongst the opinion of employees regarding effectiveness of training program with respect to selected variables in cement industry.

**Hypothesis 2**

H2₀: There is no significant association amongst opinion of employees regarding impact of training program on employee skills on the basis of training methods.

**Hypothesis 3**

H3₀: There is no significant association amongst opinion of employees regarding impact of training program on employee skills on the basis of different age groups.
3.9 Statistical Tools Used for Hypotheses testing

Hypothesis is a statement which is tested by scientific methods relating dependent and independent variable of the study. Cronbach alpha for reliability, Shapiro wilk test for normality, Chi square test-Goodness of fit, Chi square test-for Independence are the statistical tests used for this study. These entire tests are applied with the help of SPSS software. Data analysis has been done with the help of above stated tests and interpretation of each aspect is done with tables, graphs and pie charts.

3.10 Sources of Data Collection

Both primary and secondary data is used for research work. Primary data means the data which is first time introduced to research work, which is totally original and not copied from any study material. Secondary data which is not original by nature and is taken from other sources as journals, library books, magazines and internet etc. Primary data is essential for new study or new subject area. Research work always needs fresh data for new insight and new study and this generates need of original data for the study. Primary data is the responses given by employees of cement industry with the help of questionnaire.

Secondary data means the data which is collected by someone else not by the researcher himself. It means second hand data. Data which is used for some other purpose or someone else gathered for his own purpose.

Literature review is an example of secondary data. Secondary data can be gathered by journals, annual reports of cement companies, technical reports, books, magazines, articles, research papers, computerised bibliographies etc. Reports of cement industries are very useful
for gathering secondary data for research work. Every organization has their reports which come on monthly or quarterly basis.

### 3.11 Sample Design

**Determination of Universe**

Employees of cement industry are the universe of this study.

Ultratech Cement, J.K Cement, Shree Cement, Wonder Cement are the four cement companies where research is being conducted. Rajasthan is the sampling frame of research study.

**Determination of Sample Size**

Number of employees (300) in the universe is the sample size of study. Sample size is employees of all four cement companies.

Sample size=300

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Sample size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultratech Cement</td>
<td>98</td>
</tr>
<tr>
<td>J.K Cement</td>
<td>85</td>
</tr>
<tr>
<td>Shree Cement</td>
<td>59</td>
</tr>
<tr>
<td>Wonder Cement</td>
<td>58</td>
</tr>
</tbody>
</table>
3.12 Respondents

The respondents are

- Employees of Ultratech Cement
- Employees of J.K Cement
- Employees of Wonder Cement
- Employees of Shree Cement

3.13 Variable and Parameters

Different variables and parameters are taken into consideration for research work. It includes dependent and independent variables. Independent variable means which has no effect of influencing factors whereas dependent variable varies with respect to relative factors. Independent variables are communication skills, technical awareness, role clarity, motivation, leadership, team work, confidence and dependent variable is training program.

3.14 Sampling Technique

Convenience method of sampling is used for research work. It means employees are selected as per the convenience of study.

3.15 Survey Instrument

Survey instrument is used to determine and analyse the views of respondents of cement industry about training program, training need assessment, impact of training on employee skills and performance. A closed end structured questionnaire is used for research work.
3.16 Data Analysis and Data Interpretation

After collection of data through questionnaires, tabulation and coding of data has been done. Values will be assigned to each data and graphs, charts will be prepared with the help of SPSS software. Data interpretation is done with the help of charts and tables. Each parameter is analyzed with its table and pie-charts followed with interpretation. Data is analyzed with the applied tests, conclusions and findings are drawn with the help of data analysis. Cronbach alpha for reliability, Shapiro wilk test for normality, Chi square test-Goodness of fit, Chi square test-for Independence are applied for testing of hypothesis.

3.17 Limitations of the Study

- Company has its confidential methods and assessments of training program, so it was very difficult to get data through questionnaires.
- In the fast growth of Indian cement companies, the data collected may get outdated after a time period as training assessment needs and training methods will not be same in the challenging and competitive business world.
- People works in shifts, so it becomes hard to contact them in night shifts.
- It was difficult for employees to fill correct data because of company rules and policies on confidential matters.
- It was difficult to enter into cement companies premises at times.