CHAPTER – 4

RESEARCH METHODOLOGY

“The genuine benting of acquiring knowledge is that you can learn anytime”

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“Leadership and learning are indispensable to each other”

John F. Kennery

Importance of Study

All business undertakings operate in the world of uncertainty. There is no unique method which can entirely eliminate uncertainty. But research methodology, more than any procedure, can minimise the degree of uncertainty. Thus it reduces the probability of making a wrong choice amongst alternative course of action. This is particularly significant in the light of increasing competition and growing size which make the task of choosing the best course of action difficult for any business enterprise.

Since the present study is concerned with an analysis of an organization with respect to learning dimensions, sound methodology is required in the present chapter.

It is imperative that any type of organisation in the present environment needs systematic supply of information coupled with tools of analysis for making sound decisions which involve minimum risk. It is in this context present research is undertaken.

Research is purposeful investigation. It provides a structure for decision making. There are three parts involved in the research.

(i) The implicit question posed
(ii) The explicit answer proposed

(iii) Collection, analysis and interpretation of the responses

This third part is the defence that justifies the recommendation and is viewed as research. This research identifies a process by which the organisation attempts to supply the information required for making sound management decisions.

In this chapter, detailed description of various procedural steps adopted by the investigator are being given in the following heads:

(I) Statement of study
(II) Objectives of study
(III) Major Hypothesis
(IV) Sampling
(V) Data Collection tools and techniques
(VI) Definitions of important terms

1. **Statement of Study.**

In a Learning organisation, we describe the systems, principles, and characteristics of the organisation that learn and produce as a collective entity.

In the present study five main dimensions are analysed under the following title:

“Dimensional Analysis of Learning Organisation and its application to Power Sector in Gujarat”.
2. Objectives of the Study:

Electric Power supply has been viewed both as public right and public service in our country ever since independence. The government provided this service till the end of the 20th Century. However, ill management and poor governance led to rising deficits and turned SEBs into sick organisations.

The changed scenario of economic liberalisation and globalisation has impacted the power distribution utilities. The utilities have now to be managed more efficiently, generate revenues and provide better services to the consumers. Many challenges and issues have emerged in the operation and management of the utilities.

In view of the above challenges, it tempted researcher to apply the concept of Learning Organization to the power sector in Gujarat where it is still undergoing the transformation stage, to make it efficient and competent in the power sector.

Therefore the following are the objectives of the study:

(A) To identify basic dimensions promoting Learning in organisation

(B) To device tool for measuring dimensional study.

(C) Application of tool to power sector to identify the performance level on each dimension.

(D) To offer useful suggestion for updatisation of organisation in respect of learning organisation.

3. Major Hypotheses:

The following hypotheses have been formulated:

a) Organizations differing in the level of Learning will show differential impact on organization involvement of the employees.
b) The commitment level of employees is expected to vary in accordance with the level of Learning Organizations.

c) Organization with high level Learning is expected to be more effective, than organizations with relatively average and low level of Learning.

d) The performance level of each organization will show significant variation in each of the five dimensions of Learning Organizations.

e) Respondents are expected to show variation in respect of availability of facilities and their inclination to use these facilitators.

4. **Sampling:**

There are more than 250 cadres in the GUVNL companies. Representatives of all the three main departments of the GUVNL i.e. Technical (Engineers), Finance and Administration (H.R.) were considered for administering the tools. The questionnaire is administered to relatively senior officers of all the seven companies (30 each) in the power sector of Gujarat State so that appropriate response is received.

Total 30 officers (class I to III) included from all the seven companies. Out of 30, half i.e. 15 were taken from technical side and remaining 15 from non technical side (Finance and H.R.). These samples were randomly selected.

In the technical wing, samples were selected from all the categories working in the Board i.e. right from Chief Engineers to
Deputy Engineers who are class I officers and Junior Engineers who are class II officers. In Engineering category there are only Class I and II officers.

On Non-technical side, up to Class III employees were considered.

Non-technical officers and other staff were taken from Accounts, Human Relations Dept, Legal Dept and other staff who are assisting the line managers in various departments. The total number of Technical and Non-Technical staff of each company is shown in the Table given below: (app.)

TABLE-15

TOTAL NUMBER OF EMPLOYEES IN THE GUVNL COMPANIES

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name Of The Company</th>
<th>Total Employees</th>
<th>Total Engineers</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>GUVNL Holding Co.</td>
<td>300</td>
<td>35</td>
</tr>
<tr>
<td>2</td>
<td>GSEC – Generation Company</td>
<td>9200</td>
<td>650</td>
</tr>
<tr>
<td>3</td>
<td>GETCO – Transmission Company</td>
<td>13000</td>
<td>1000</td>
</tr>
<tr>
<td>4</td>
<td>PGVCL Dist. Company</td>
<td>13000</td>
<td>1200</td>
</tr>
<tr>
<td>5</td>
<td>UGVCL – Dist. Company</td>
<td>7500</td>
<td>750</td>
</tr>
<tr>
<td>6</td>
<td>MGVCL – Dist. Company</td>
<td>6000</td>
<td>450</td>
</tr>
<tr>
<td>7</td>
<td>DGVCL – Dist. Company</td>
<td>4500</td>
<td>350</td>
</tr>
</tbody>
</table>

As it is a new subject to the employees of the companies, the questionnaire was explained in detail with explanation of each word appearing in the questionnaire.
5. Data Collection tools

Adequate tool is needed for the measurement of level of learning organization. Many efforts have been made in this direction. Several tools are now available for the measurement of learning organization; some of these are briefly presented here:

**Review of questionnaires**

1) Prof. Udai Pareek developed organizational learning diagnostics (1988) to help organizations to know about the level of learning potentials and discovering which dimensions are strong and weak so that remedial action can be taken.

Two dimensions are assessed by the organizational learning diagnostics (OLD):- Organizational learning sub-systems or phases, and organizational learning mechanisms.

The instrument asks to rate twenty-three mechanisms on a five point scale. The more frequently these mechanisms are used, the stronger is the organizational learning. These mechanisms are grouped into three sub-systems:

- √ Acquiring and examining (the innovation phase),
- √ Retailing and integrating (the implementation phase),
- √ Using and adapting (the stabilization phase).

These are sub-systems of organizational learning in the sense that they are present in an organization in varying degrees and are inter
related with a feedback loop, they are phases in the sense that for one particular innovation, they appear in an order – one preceding the other. The OLD contains eight, seven and eight mechanisms, respectively, for three sub-systems of phases.

All twenty-three items can be grouped into five categories of organizational learning mechanisms:

Experimentation and flexibility,
Mutuality and team work,
Contingency and incremental planning,
Temporary systems,
Competency building.

The scores on OLD can be used by top management to diagnose the organizations strengths and weaknesses. It also helps to take steps to improve the dimensions that are weak.

If developing organizational learning systems is a direction that an organization has accepted, it needs to develop action guidelines or policies to facilitate the process.

Prof. Pareek suggested that focusing on the following concerns had been helpful to some organizations as they develop the policies.

Ω Enhancing functional autonomy with accountability
Ω Availability of support and resources
Ω Competency building
Ω Networking
Higher the score for any dimension, the greater the amount of attention that is being paid to the organizational learning in that dimension. The lower the score, the more that attention is lacking in that dimension.

2) Ramnarayan (undated) has developed organizational learning climate questionnaire, who study learning capability of the organization and also for diagnostic purpose.

The instrument consists of 46 items to measure six dimensions of learning capacity. Each item is rated on five point scale, which has combination of positive and negative statements. Some of the dimensions are split into sub-dimensions.

The dimensions measured by each of the item are indicated below:

i) Clear focus on objectives and plans for internal integration
   i.a) clear focus on objectives
   i.b) attention to integration among departments functions
   i.c) attention to vertical integration

ii) Sensitivity to people potential and needs

iii) Concern for long term planning and success

iv) Support of experimentation / creativity

v) Environmental scanning

vi) Concern for development of capabilities

The higher score indicate good learning capability existing the organization and lower score indicate absence of these opportunities.
3) Learning Organization Profile by Michael J. Marqardt (1996): Marqardt, based on his experience with number of learning organizations, as well as his analysis of hundred of articles and books on learning organization, has concluded that the full richness of the learning organization incorporates five distinct sub-systems – Learning, Organization, People, Knowledge and technology (these sub-systems are termed as ‘dimensions’ by the researcher in the present investigation.

He has given ten statements for each dimension and response is asked from the respondents to decide the extent to which the statement actually applies to the organization. Score above 70% of each dimension and overall total score can rank it as learning organization.

4) Dimensions of the learning organization questionnaire by Karen E. Watkins and Victoria J. Marsick (1999): Authors have identified seven action imperatives – activities people need to be involved in – that characterize companies, those are becoming learning organizations.

The model created by the authors with these imperatives, emphasizes three key components:-

- systems – level, continuous learning,
- this learning then generates and manages knowledge outcomes, and
- these outcomes lead to improvement in the organization’s performance and value.
Their research has confirmed the links between the above three components.

As suggested, this questionnaire enables to think about how organization supports and uses learning at individual, team, and organizational level so that it can be determined that whether business is using learning to improve performance.

Author has expressed that data from the profile should be taken seriously to decide the strategic action needed to address the priorities that emerged from the data.

They have taken 55 items in the questionnaire. Out of these 55 items, 13 are under the ‘individual level’, six items are under ‘team’ or ‘group level’, 24 items are covered under ‘organizational level’, 12 items are covered under ‘measuring performance at the organizational level’.

For each item, degree is determined to which this is something that is or is not true of the organization.

There is no ‘right’ or ‘wrong’ answers but the perception of where things are at this time, is analyzed.

5) Organisational Learning Profile : (OLP) by Dibella (2001)

Administering of above tool was with a large organization and involved all the members of the team scoring an assessment individually, the compilation of the results and the discussions of the results and desired ideal.
According to DiBella, the learning actually occurs during this discussion phase of gap analysis of where the organization perceives itself, and where it would like to be, then developing a plan to achieve the desired levels. The Organisational Learning Profile (OLP) tool examines seven sources from where information originates within the organisation and how it is utilised. Each dimension is given opposite points on a continuum and the rater determines where on the spectrum each area falls within the organization. Secondary examination looks at factors that enhance learning, looking for the degree of evidence that the particular factor is functional within the organization.

6) Kline Learning Organization Assessment: 36 statements were selected which show the high degree of Learning Organization Characteristics, administered at 5 point scale (1 to 5). The results of this assessment can be compiled, analyzed, and used in several ways. If average is taken, then average indicates (on a scale of 1-5), the degree of which the respondent believes his organization possesses the characteristics of a learning organization. If it is between 4 to 5 then there is high degree of Learning Organization characteristics. Kline’s assessment also includes a matrix to break down the ratings into specific category averages.

7) Learning Organization Scale (LOS) developed by Santosh Dhar and Upinder Dhar based on the study of relevant literature on the subject. It is the ultimate goal of the process that promotes continuous
learning at the individual, group and organizational levels to modify behaviour and positively affect the organization’s ability to deal with the change that a technology transfer brings about. Author has observed that much has been written to convince organizations of the benefits of developing themselves as learning organizations, but little has been offered in terms of assessment tools and empirical data, particularly in Indian context. They have suggested that as today change is recognized as one of the constants in all organizations to survive and stay competitive, organizations must find ways to effectively engage employees in the change process. An instrument initially having 80 items was developed based on 5-point Likert scale. While administering the instrument, 4 items found to be insignificant and were dropped. Remaining 76 items were again subjected to item-correlation and all the 76 items were found to be significantly correlated with the total score of the scale. The raw scores were subjected to factor analysis and 24 factors were identified. These 24 factors were subjected to second order factor analysis and 9 dimensions were identified as under: a) Knowledge Transference b) Competence c) Supportive Superiors d) Growth Opportunities e) Multi-skilling f) Continuous Learning g) Empathy h) Facilitating Information System i) Results Orientations Use of the Scale Authors suggested that it could be used for large groups, either for research, survey or comparison of organizations. The instrument can be used for assessing the position of an organization on each factor as well
as dimension of the Learning Organization. Necessary steps can be taken to improve the same. It is a quick measure of knowing whether a particular organization is a Learning Organization or not and can help in taking the steps to have the desired results in terms of higher effectiveness.

From among these tools the one which was developed by Michael J. Marquardt (1996) was used in the present investigation.

Description of the same follows:

Following tools were used for data collection:

(a) Questionnaire – Appendix-II

(b) Check-list – Appendix - III

(a) **Questionnaire:**

The questionnaire was constructed with a view to elicit the views of the employees of all the seven companies i.e. Gujarat Urja Vikas Nigam Ltd. (GUVNL), the holding company and remaining six subsidiary companies, Gujarat State Electricity Corporation Ltd. (GSECL), Gujarat Energy Transmission Corporation Ltd. (GETCO), Madhya Gujarat Vij Co. Ltd. (MGVCL), Dakshin Gujarat Vij Co. Ltd. (DGVCL), (Uttar Gujarat Vij. Co. Ltd. (UGVCL) and Paschim Gujarat Vij. Co. Ltd. (PGVCL) on the Learning Organisation dimensions.

While going through the work carried out by different researchers on the subject, it is revealed that four questionnaires were prepared by the researchers. An extensive study was carried out by contacting various
management experts, which included expert from academic side, HR consultants, and officers of Electric Power Utilities, for finalising the questionnaire. Questionnaires prepared by the earlier researcher helped in selecting the main dimension of a learning organisation to finalise the questionnaire.

Basic dimensions of Learning Organisation identified in which learning could be permitted to make it viable and effective.

The tool thus prepared helped researcher to find out up to what extent the Organisation could be considered a learning organisation.

The following are the dimensions identified to study the company’s profile of Learning Organisations.

(1) **Learning Dynamics:** (Continuous learning), Individual, Group/Team, and Organisational.

(2) **Organisation Transformation:** Vision, culture, strategy and structure.

(3) **People Empowerment:** Employee, Manager, Customer, Alliances, Partners and Community.

(4) **Knowledge Management:** Acquisition, Creation, Storage/Retrieval, and Transfer/utilisation.

(5) **Technology application:** Information systems, technology based learning, and Electronic Performance Support systems.

The above Learning Organisation dimensions are taken from the Book “Building the Learning Organisation” – a systems approach to quantum
Improvement and Global Success, with due permission of the Author, Mr. M.J. Marquardt. (Appendix-III)

Questions are modified to the need of the Electrical utilities i.e. suitable to the service industry.

**Check-List:**

It is felt appropriate to prepare a check list of facilitators of Learning.

The response received by administering the check list, gave idea of the efforts made by the companies to make company a competitive one, by acquiring knowledge and having a zeal to utilize it for their development.

The advantage of check list is to give clear picture of the ideology of the organization whether it has zeal to go for learning organization or not. In the check list, 20 most desired facilitators were taken to be checked, about the existence of these facilitators in the organization. Each facilitator has its importance as far as “learning concept” is concerned in the organisation.

Need of these facilitators can be explained as under:

1. **Data Bank for easy access of information:**

   It solves purpose for getting any sort of information in the organisation. Human Resource is the most important resource of the organisation, upto date record of the manpower employed should be stored in soft as well as hard copy in the HR Dept. It is most important that right kind of persons are posted at right kind of place at right time, whenever vacancy arises, only formalities can be completed to fill that vacancy by next senior and competent person. If care is taken to have appropriate person for that vacancy, such data banks is always useful which may give such type of information. Likewise on technical side, if data is available of the
occurrences or problems faced during the functioning of the system, then each time when problem arises, if history is available one can find out the solution.

As such it can be seen that data bank in all the department is a must to have any information for meeting any emergency.

(2) Coaching/Mentoring by the Seniors:

For any healthy organisation seniors have to share their knowledge/experience to educate the subordinates. If seniors motivate while taking task from the subordinates by guiding them properly, it creates a sort of confidence in the juniors for solving the problems. If they are fired by the superiors for the mistakes committed by them, it creates a negative environment in the organisation.

Whenever any officer is nurturing them and educate them to work hard to achieve organisational goals and to achieve the ‘vision’ and ‘mission’ of the company, it gives positive message to the juniors and motivate them to learn more and more to get the desired results.

Seniors are considered as ‘local guardian’ of the juniors in the company. Therefore juniors should be nurtured in the way our parents are taking care of us.

(3) Use of performance appraisal for learning/growth of employees:

It is well known fact that performance appraisal is important tool which can be used for the development of human resources. It is one of the powerful sub-systems of HRD.
If properly designed and used then without any extra efforts, it can help in increasing the efficiency of the employees as well of organisation. Therefore taken in check list.

4. ‘Learning Attitude of Employees is included in the performance appraisal:’

As attitude is consistent pattern of behavioural means consistent pattern of thinking for learning. That is what definition & Learning Organisation says and therefore it should be taken in performance appraisal. Also discussed in No. 3 facilitator, performance appraisal can be used to identify the attitude of the employees. If it is included in the performance appraisal then such employees who are assessed having learning attitude, can be taken easily in the learning process of the organisation. Moreover unless any employee having learning attitude, his growth cannot be assured. (since PA includes performance on the job and behaviour of the performer, the proper evaluation of both these aspects will enable the appraiser to plan for better performance and better relationships with others. It is included in the check-list for this purpose.


It is well known fact that knowledge as a resource has become more important for organisations than any other resources.

The organisation’s culture, technology, operations, systems and procedures are all based on one or other expertise and knowledge. Employees need knowledge to increase their abilities to improve the products or services, thereby providing quality products and services to the
consumers. Knowledge is food of the learning organisation. It is the nutrient that enables the organisations to grow.

It should be a part of any training programme i.e. how knowledge is acquired, created, stored and transferred so that it can be utilised and approved.

It is taken as one of the dimensions of Learning Organisations. Response to this facilitator could certainly reveal the % upto which the organisation can be considered as Learning Organisations.

(6) Exposure of Top leadership to the knowledge management and Learning Organisations Concept:

The success of HRD concept or Learning Organisation concept basically depends upon the ideology of top management or say attitude of top management towards these concepts.

Top Management should fully understand the system and start implementing the Learning Organisation Concepts for improving the systems should also utilise new ideas and new technologies as a part of Learning Organisation.

Middle management who is the key force in execution of project in any organisation, always looks towards top management for policy decisions and based on their mind set and their attitude towards subordinates the organisational culture is decided. By taking quick and constructive decisions which involves knowledge management and learning organisation concepts, it gives an impression that top management desires that such ideology should be accepted by all the employees of the
organisation. Such type of culture gives confidence to the employees to work hard by utilising their best hidden qualities.

It creates a very healthy atmosphere in the organisation getting the desired results.

Researcher is confident that if top leadership is appraised in a proper way in the interest of organisation, then there is no doubt, why top leadership should not adopt the concepts of HRM/HRD/L.O. in the organisation in this competitive age.

(7) On-the-job training:

GUVNL companies are purely technical organisations. All the operations are technical and are the part of the services provided to the consumers of the State. The number of consumers have already crossed 1 Crores mark.

Any malpractice in operation of the Generation, Transmission and Distribution system may cause heavy loss in terms of revenue to the Company/Govt. And in terms of damage in technical system which takes sufficient time to get rectified/restored.

Further technology development is beyond anybody’s imagination. Whatever is invented today is obsolete after few months. If officers are not keeping pace with the development, organisation cannot survive. Therefore each technical employee must know how to operate latest technical equipments, for that on the job training is a must. Response on this facilitator will give the attitude of top leadership, how they are committed to
implement latest technology and their willingness to impart training of these equipments to all the tech. Employees.

(8) Availability of Information regarding advanced technology:

It is correlated with facilitator No. (7). It must be the prime duty of the top management to:

(a) Provide latest information regarding new technology in the electrical utilities or employees should be encouraged to get such information through ‘Internet’.

(b) Line managers should be given freedom to experiment with the new technology and its implementation in the system. Top management should also play the role of learners i.e. to be curious to learn any new development in the technology which is advantageous in electrical utilities.

It is also possible when each utility has its own R&D dept. Where such informations can be stored and can be experimented.

Separate budget can be provided for such activities which has long term advantages.

(9) Availability of literature on the best practices of electrical utilities in the world:

All the electrical utilities in GUVNL are subscribing the journals giving latest information in this field. But the same are circulated upto grass root level would be known from the responses. If R&D Dept. Should be established then
it could be the duty of the dept. To collect such information from the ‘Internet” and from journals and to circulate upto the grass-root level.

Such information would give awareness among officers that where do they stand to achieve the international standards. If encouraged by the top management, officers can take risk to experiment of putting best practices into their working to see the improvement in the performance.

(10) **Department Libraries:**

It is observed that in the modern age of ‘internet’ importance of libraries is not found in young generation. But libraries still can serve the purpose of ‘knowledge bank’ as ‘internet’ has certain limitations because of ‘connectivity’ problems etc. This facility is still not available to all, whereas all can have access to the libraries at any time during working hours. It contains variety of subjects, where internet has not even entered. Meaning thereby, all dept. Heads can have their own library of useful books and important journals, which can be utilised by all the employees of the company.

(11) **Domain related knowledge training to the employees:**

Some time in absence of regular induction training to the employees, it so happens that they are not aware about the mission/vision of the company, business of the company and even do not know the structure and name of the top management officers of the company.

It is very essential that an employee should have above knowledge of its own company. Becoming familiar with the working of the company and
having Domain related knowledge, he will have the clear vision of his aims and objectives in the Company.

(12) **Availability of Case studies related to power sector to the employees:**

It is well known fact that ‘experience’ is the best teacher in anybody’s life. Employee can learn better from the experience of others. It is observed that such case studies providing experimental details are available in the journals and on the internet. These can be very useful in solving day to day practical problems in the companies.

Even problems faced by the utilities can be sent to the journals for open discussions to all the activities seeking solution to the problems. This facilitator is very important from the point of view that all the technical/financial/administrative problems of Electrical utilities are identical throughout India and study of such cases may be helpful in increasing the efficiency of the electrical utilities.

(13) **Separate funds for further education of the employees:**

If any management is keen to see that its employee should get further education for the long term benefit of the organisation, then it is the sign that particular organisation is preparing itself to compete at the national or international level.

Facilitators No. (8) (9), (10), (12) and (13) are the key facilitators which identify the culture of the organisation and it also denotes that organisation is moving in a proper direction to become a learning/competitive organisation.
It works in retention of manpower in the organisation. It is one of the most important factor of the learning organisation, where learning is encouraged and further education becomes motivation for the employees.

(14) **Exposure to the advanced Technology:**

There are four distribution companies in Gujarat. All the companies are taking part in the competition for award given by the Ministry of Power, Govt. Of India for best company in the country. Excellence can be achieved if companies can adopt latest technologies. If all the four companies can coordinate with each other and share their experiment with new technology, it can save money, time and man-hours of the company. Any development by one company, can be shared by all other three companies and as such efforts for excellence by one company can be beneficial to all the three companies.

Knowledge of latest development is one aspect, whereas its use by the grass root employees is most important aspect. The basics of learning organisation play important role for continuous learning and adopting new technology.

Response to this facilitator could give real picture of the organisation.

(15) **Research and Development Activities:**

To find out whether any organisation is progressing or a learning organisation, two factors could be checked. First, if any R&D dept. Is there and how much annual budget is allotted to R&D activities.
Electrical utilities being pure technical organisations, R&D activities can be considered as lifeline for these organisations. Without R&D, progress and survival in the market is impossible.

Research can be made for the consumer orientation also. Being a service sector with social obligations to supply reliable/uninterrupted at reasonable price, electricity to all consumers, its service should be of international standard. Quality of material/equipments used in the system and quality of service to the consumers make the utility as one of the best utility and contribution of R&D is essential for the above factors.

(16) **Incentives to the employees for innovative ideas:**

Incentives are nothing but appreciation of the employees working. In terms of money it has less contribution to the employee’s satisfaction but it increases the employee’s motivation and morale to innovate and to think about the increase in productivity.

It is a strong catalyst which increases employee morale which in turn increases courage, confidence and enthusiasm in the employee which is reflected in his performance.

Employees should be encouraged with incentives to always think some new or innovative ideas which can contribute to the improvement in the system.

It is human psychology to always work in consideration. It is possible in exceptional cases that an employee is fully dedicated to job without expectation. It is always ‘give & take’ which gives fruitful results.
17) **Motivation and permission of further studies (Academic Degrees) to the employees:**

Work culture in the Govt. Organisation is different than private sector. In Govt. Companies “Responsibility” and “Accountability” is very less but job security is full. Now-a-days, no doubt, trend is changing and Govt. Organisations are also taking actions against their employees who are non-performers, and performers are motivated to perform better.

Motivation is a driving force or forces responsible for the initiation, persistence, direction and vigour of goal directed behaviour.

It is the quality of a good leader who can motivate his followers/group members to achieve the organisational as well as individual goals. Unless and until organisational goals are clubbed with individual goals, it is difficult to motivate an individual to perform upto the mark.

In learning organisation for continuous learning, one of the motivational factor is to provide opportunity for higher studies sponsored by the company or leave is granted on full or half salary for further studies.

The next important aspect which can be taken care in the organisation is that after employee gets additional qualification, it should be utilised with giving additional responsibility and little autonomy to the concerned, otherwise it would be wastage of money of the company and will give frustration to the employee which is more dangerous.

(18) **Problem solving in groups:**

It is always a typical situation in good organisation, when any problem arises, either it is disclosed to superiors or efforts are made to resolve the same with the help of colleagues as a group discussion. It is discussed with
colleagues without a fear that it might be considered, as mistake and may get firing from the boss. It is a healthy sign in the organisation.

A positive approach and culture is required to be developed in the organisation so that in case of any problem or emergency, the same can be discussed with boss, subordinates and colleagues to get its perfect solution. In such situation participative approach increases morale and confidence of the employee who is surrounded with such problem.

It increases confidence in the employee because the solution thus is the result of group discussion and joint decision is taken which may not hold an individual responsible for not getting result out of the solution.

(19) **Seminars/conferences on innovative idea in Power Sector:**

Sharing of experience and exchanging problem solving techniques among technocrats of power sector can be termed as a healthy practice in the interest of the Power Sector.

Researcher is tempted to quote one such incidence of the year 1993. Looking to the complexity of the Indian Electricity Act 1910, in dealing with some of the acute problems such as high T&D loss, theft, and arrears piling in the Electricity Boards, a national seminar was organised by Gujarat Electricity Board of the Legal advisers of all Electricity Boards. All the problems and working of Legal Departments of the SEBs were discussed in detail. Minutes of the said meeting were published in National News papers and based on those news items, details were called by Central Government and the said minutes were discussed in the parliament and necessary amendments were suggested by the cabinet in the i.e. Act. 1910. It is therefore always advisable to conduct such seminars where
discussions can take place of vital points and can arrive at some solutions/suggestions acceptable to all, and in the interest of Power Sector of the Country.

Employees should be sent to such seminars so that they can learn and know the outside world and the latest developments taking place in the country as well as in the world.

(20) Practical Training on equipment during training programmes:

Majority of the employees are always eager to know how to operate the latest equipments/instruments used in the system. Power sector electrical utilities are highly technical organisations, all the concerned employees should know the use of such equipments otherwise the employees who are dealing with the instruments not aware of the operation, may lead to mal-operation and wrong data submission which may hamper the system or affect the revenue.

It is desired that in the training programme practical training is imparted on the instruments/equipments to make them knowledgeable about these instruments/equipments for the smooth functioning of the system.

Both the tools i.e. questionnaire & checklist were given to samples in the following manner:

(a) Seniors officers were contacted personally i.e. Executive Engineers and above were handed over the tools personally and basic objective of the research was explained to them and few tools were given to them to get those filled by their subordinates (Class I, II & III employees).
It was requested to the Senior officers that they should explain questionnaire 7 checklist properly to their subordinates for getting accurate response.

(b) GUVNL training institute is there in Baroda, where all the employees from Chief Engineers to helpers/peons are imparted training on various subjects (Technical/Non-Technical).

Researcher being regular Faculty to this Institute got privilege to contact hundreds of trainees. While distributing tools in the class, proper explanation was given to participants and were given time to fill up the same with due understanding. It was also taken care that employees of all the seven companies are covered.

**Difficulties faced for administering tools:**

Approximately 400 tools were distributed among the samples.

More than 300 tools were received. These tools were scrutinised and 15 Tech & 15 Non-Tech employees from each company were separated from the lot to analyse the results. Employees from MGVCL & GSECL companies returned most of the forms so these were more than 30 and therefore which were not filled up properly were discarded at first instance.

Number of employees including top officers were hesitant to fill up the tools. They were afraid that if correct response is given, top management or any other authority may take them to task. They were explained that these responses are kept confidential and utilised for research work only and are not given to the management or any authority.
Some of the officers filled up the questionnaire with the condition that they won't write their name and designation etc.

Results thus received were tabulated and statistical analysis was carried out for the responses of the questionnaires and descriptive analysis is carried out for the responses received in the check list.

6. **Definition of Important Terms:**

Many special terms are used in defining and describing learning organisation. In addition, these are some terms which assume a different commutation in reference to organisations learning.

**Accelerated Learning:** A system of learning designed to improve rate of learning and overall retention by incorporating creative, sensory rich learning techniques.

**Action Learning:** Deliberate, conscious effort to review and reflect on action of the individual or the organisation. It is the combination of p (programmed or already existing information) plus Q (questioning of existing information to learn from and apply it).

**Adaptive Learning:** an individual's or organisation's learning from experience and reflection.

**ADL (Advanced Distributed Learning):** Developing inter-operability across computer and internet based learning courseware through a common technical framework that contains content in the form of reusable learning objects.

**Anticipatory Learning:** an individual's or organisation's learning in order to meet needs that are projected for the future. The anticipatory Learning sequence is vision reflection-action.
ATM (Asynchronous transfer mode): A network technology for high speed transfer of data.

Authoring tool: A software application or programme that allows people to create their own e-learning courseware.

Browsers: Software that allows users to find and view information on the Internet.

CAD/CAM (Computer aided design/computer aided manufacturing)

CBL (Computer based learning): Umbrella term that includes using computers for instruction and management of teaching and learning process.

CD-ROM: A format and system for recording, storing and retrieving electronic information on a compact disc that is read in an optical drive.

Competency: an area of capability that enables a person or organisation to perform.

Continuous Learning culture: The environment in which people are encouraged and enabled to learn in an ongoing, continuous basis.

Core Competencies: Competencies based on what companies do best instead of according to product or market.

Dialogue: Denotes the high level of listening and communication between people. It requires the free and creative exploration of subtle issues, a deep listening to one another and suspending of one’s own views. The discipline of dialogue involves learning how to recognise the patterns of interaction in terms that promote or undermine Learning.

If unrecognised or avoided, they undermine Learning. If compromised and surfaced creatively, they can actually accelerate
Learning. Dialogue is the critical medium for connecting, inventing and coordinating Learning and action in the workplace.

**Double-loop learning:** In depth organizational learning that looks at the norms and structures behind the company’s methods of functioning. Double loop learning questions the system itself and tries to determine why errors or success occurred in the first place.

**DVD (digital videodisc):** A form of computer disc with the capacity to store substantial amounts of video.

**E-Learning:** Delivery of content via internet.

**Electronic Performance Support systems (EPSS):**

Systems that use database (text, visual, or audio) and knowledge bases to capture, store and distribute information throughout the organisation so as to help workers reach the highest level of performance in the fastest possible time, with the least personnel support. The systems consist of several components including, but not limited to interactive training, productivity and application software, and expert feedback systems.

**Explicit Knowledge:** Formal, systematic, and easily shared knowledge.

**Generative Organisational Learning:**

The Learning that an organisation generates or creates itself from its own reflection, analysis, or creativity.

**Group/Team Learning:** Alludes to the increase in knowledge, skills and competency which are accomplished by and within groups.

**HTML (Hyper text markup Language):** The coding language used to create hyper text documents for use on the web.
Individual Learning: Refers to the change of skills, insights, knowledge, attitudes and values acquired by a person through self-study, technology-based instruction and observation.

ISDN (Integrated Services Digital Network): Service that provides high capacity digital transmission allows communication channels to carry voice, video, and data simultaneously.

Knowledge Architecture: The repository for shared knowledge and collective intelligence that is organised for easy access by any staff member, any time, and from anywhere. For example, a database that collects key Learning of individuals or an on-line newsletter that systematically gathers, organises, and disseminates the collective knowledge of the organisation members.

Knowledge acquisition: The process by which existing knowledge is collected or obtained. Knowledge can be purchased or borrowed.

Knowledge Creation: The development of new knowledge through innovation, problem solving, insights or adaptation.

Knowledge Retrieval: The acquisition of knowledge that is already in the organisation and stored in various systems, such as human, computer and written documentation.

Knowledge Storage: The coding and preserving of the organisations valued knowledge for easy access by any organisational member, at any time, and from any place.

Knowledge Transfer: Process by which information is moved and shared throughout the organisation, through individuals and groups across various functions. This can be done through personal, mechanical and electronic means.

LCD (Liquid Crystal Diode): Flat display formats used with lap-top, computers, and video projection devices.
Learning Organisation: A company that learns powerfully and collectively and is continually transforming itself to better manage and use knowledge for corporate success, it empowers people within and outside the organisation to learn as they work and it utilizes technology to maximize Learning and production.

Mental Model: An image of reality. In organizational learning, refers to a person’s values and beliefs regarding learning.

Mission Statement: The operational, ethical, and financial guiding direction of a company, not simply mottoes or slogans. The mission statement articulates a company’s goals, dreams, behaviour, culture, and strategies.

Organisational Learning: Refers to “how” Learning occurs on an organisation wide basis (as opposed to Learning organisation which describes the “what”). Refers to the systems, principles, and characteristics of organisations that learn as a collective entity.

Organisation Level Learning: The third level of Learning in a Learning organisation. Represents the enhanced intellectual and productive capability gained through corporate wide commitment and opportunity to continuous improvement. It differs from individual and group/team learning in two basic respects. First, organisational Learning occurs through the shared insights, knowledge and mental models of members of the organisation. Second, organisational Learning builds on past knowledge and experience – that is, an organisational memory, which depends on institutional mechanisms (e.g. policies, strategies, and explicit models) used to retain knowledge.

Organizational Transformation: Large scale organizational change that affects mission, values, structure, and systems.
Personnel Mastery: High level of proficiency in a subject or a skill area.

RAM/ROM: Random Access Memory / Read Only Memory); Two fundamental forms of computer memory that define the machines capacity.

Reengineering: Restructuring of organisations around outcomes, and not tasks or functions. It involves a fundamental rethinking and remarking of business systems that urges an overhaul of job designs, organisation structures, and management systems. Work should be organised around outcomes, not tasks or functions (e.g. streamlining structures to decrease levels that filter knowledge transfer).

Scanner: Device used to convert printed matter into digital form.

Server: A computer with a special function on a network, generally to receive and connect incoming information traffic.

Single-loop learning: Gaining information to stabilize and maintain existing operational systems.

Systems Learning: Learning which sees interrelationships and the whole as more than the sum of the parts.

Systems thinking: A conceptual framework that includes a body of knowledge and the tools to make complex patterns clearer and identified effective ways of changing them.

Tacit Knowledge: Internal knowledge that is difficult to express (compared to explicit knowledge).

Technological Architecture: The supporting, integrated set of technical processes, systems, and structure for collaboration, coaching, coordination, and other knowledge skills. It may include such electronic tools and advanced methods for Learning as
computer conferencing, simulation software, and computer supported collaboration, all of which work to create knowledge freeways.

**Technology Based Learning:** Video, audio, and computer based multimedia training for the delivery and sharing of knowledge and skills away from the job site.

**Training:** Instructional experiences for learners planned and delivered by trainers, generally in a formal setting (as distinguished) from “Learning”, where change is the responsibility of the learner).

**Vision Statement:** The intended hope and long term goal of an organisation for learning organisation, a picture of what they wish to achieve in terms of learning.

**WAN:** (Wide Area Network): A network of computers sharing the resources of one or more processors or servers over a relatively large geographic area.

**WAP (Wireless Application Protocol):** Specification that allows internet content to be read by wireless devices.

**WBT (Web-based training) **Delivery of learning content through, Web browser over the Internet, an internet, or an extranet.