CHAPTER – V

RESULTS AND INTERPRETATION

“We Learn by example and by direct experience because there are real limits to the adequacy of verbal instruction”.
Malcom Gladwell (2005)

◊

“Not by age but by capacity, Wisdom is acquired”
Titus Maccius Plautus (254 BC-184 BC)

Findings from Questionnaire administration
(Dimensions I to V)

In this chapter the analysis of the data pertaining to five different dimensions of Learning Organizations is presented, interpreted and discussed.

Questionnaire

Dimension I – Learning Dynamics:

The first dimension is “Learning Dynamics”, (continuous Learning). Any effective and progressive organization must have elaborate procedure and practices for continuous Learning. Since in the modern technological era everything moves fast. Things keep on changing. The fact which can be considered as axiomatic truth may become obsolete the next day due to technological innovations. Organizations have to become viable and they have to increase their survival capability in the fact of fast growth of technological innovations. This dimension may include encouragement to manage Learning and developmental activities, assessment of the organisation in terms of level of Learning of the employees, skill Learning through training and education, using
problem solving as an opportunity to learn, interdepartmental and intradepartmental sharing of views and experiences, through various communication means, open discussion of mistakes with a view to Learning from them, adequate incentives and help to support Learning, facility for the pursuance of Learning, facility for giving and receiving feedback, availability of knowledge and information as and when needed, maintenance of up-to-date data base of skills/expertise, consideration of employees’ suggestions by the organization for enhancement of the skills, adoption of suggestion scheme for encouraging employees to give ways and means whereby things could be improved, availability and use of adequate recourses for goal achievement, encouraging employees to learn from the experiences of other people so as to enhance own knowledge, etc.

Organisations may differ from one another in their capacity for continuous Learning. Factors like size of the organisation, openness of organizations, locations of organizations, level for participation of employees in Learning activities, openness on the part of employees to interact and share experiences, employees enthusiasm for free participation for the enhancement of knowledge, organizational ;policies and practices, skill using resources, commitment of employees to organizational development, etc, may influence the extent to which organizations can resort to continuous Learning.

The table below shows ANOVA of the data pertaining to the first dimension viz. Learning Dynamics.
### Table - 16

Showing main and interaction effects of company and nature of job (technical-non-technical).

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>Degrees of freedom (df)</th>
<th>Sum of squared or variance</th>
<th>Mean sum of squares</th>
<th>F</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nature of Job (Status)</td>
<td>1</td>
<td>51.505</td>
<td>51.505</td>
<td>3.478</td>
<td>Barely sig.</td>
</tr>
<tr>
<td>Company</td>
<td>6</td>
<td>261.324</td>
<td>43.534</td>
<td>2.941</td>
<td>Highly sig.</td>
</tr>
<tr>
<td>Status x company</td>
<td>6</td>
<td>149.629</td>
<td>24.938</td>
<td>1.684</td>
<td>Not sig.</td>
</tr>
<tr>
<td>Error (within)</td>
<td>196</td>
<td>2902</td>
<td>14.810</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Table-16A

Showing mean scores for the main and Interaction effects on continuous Learning

<table>
<thead>
<tr>
<th></th>
<th>A1 GE</th>
<th>A2 GSEC</th>
<th>A3 DGVC</th>
<th>A4 MGVC</th>
<th>A5 UGVC</th>
<th>A6 PGVC</th>
<th>A7 GUVN</th>
<th>AV.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technica l (B1)</td>
<td>27.6</td>
<td>27.9</td>
<td>27.2</td>
<td>27.8</td>
<td>27.4</td>
<td>27.0</td>
<td>24.7</td>
<td>20.8</td>
</tr>
<tr>
<td>Non-technical (B2)</td>
<td>25.4</td>
<td>28.4</td>
<td>26.26</td>
<td>23.9</td>
<td>25.3</td>
<td>28.7</td>
<td>24.5</td>
<td>19.6</td>
</tr>
<tr>
<td>Av.</td>
<td>26.5</td>
<td>28.16</td>
<td>26.7</td>
<td>25.7</td>
<td>26.3</td>
<td>27.8</td>
<td>24.6</td>
<td>GM</td>
</tr>
<tr>
<td>Av.</td>
<td>26.5</td>
<td>28.16</td>
<td>26.7</td>
<td>25.7</td>
<td>26.3</td>
<td>27.8</td>
<td>24.6</td>
<td>GM</td>
</tr>
</tbody>
</table>

As per the scale for continuous Learning the minimum possible score is 15 and the maximum possible score is 60 with a midpoint of 37.5 \{60-15\)+15\} 2
Accordingly any score higher than 38 indicate that the organization makes effort for continuous Learning, and score below 38 indicates selectively lack of continuous Learning in the organisation.

Looking now to table 1 it could be seen that the F ratio of 3.478 is barely significant. The mean scores of continuous Learning for technical and non-technical employees are 20.81 and 19.67 respectively. Both these mean scores are quite low indicating that technical personnel do not differ from non-technical personnel on the overall basis in respect of inclination for continuous Learning. Both these mean scores are quite low indicating that there is no strong thrust for continuous Learning on the part of both technical and non-technical personnel Learning So far as company’s inclination for continuous Learning is concerned the Fraction is highly significant. The range of mean scores for continuous Learning is from 24.6 to 28.16. Although all the means scores fall below the midpoint score of .38, this could be interpreted to mean that although the mean scores for continuous Learning of the seven companies differ from one another indicating variation in the practice for continuous Learning, the lower values of the mean scores could be interpreted to mean that in general the practice for continuous Learning is fairly low. The interaction between status of job (technical-nontechnical) and company is not significant indicating that no specific combination of status of job and company produces any differential impact of continuous Learning. The two effects are thus independent of one another.

On the whole all the seven companies fall far below the level of continuous Learning dimension. Also Technical and non-technical personnel do not show any differential impact on companies for continuous Learning.
Dimension II: Organization Transformation

The table below shows the main and interaction effects of companies and status of job on organization transformation.

The second dimension of Learning Organizations is Organization Transformation in terms of vision, culture, strategy and structure. Vision relates to what the organisation would be or where will it stand or what will be its viability or survival capability after a stipulated period of time. The organizational planners and corporate management must be clear about their vision of their organisation in terms of its development for the achievement of long term goals or objectives. The vision must be properly conveyed to all employees of all departments. All the departments of the organization constitute a dynamic whole so that no single department can lead to the achievement of long term objectives. All the departments contribute to the development or goal achievement in their own way. The total outcome would be the achievement of long term goal or objectives. The answers to the question “why are you there for” to all the employees will enable us to know whether the vision of the organisation is properly communicated or not. The term culture relates to ways of thinking feeling and acting. The culture has two aspects; material and non-material. Material culture refers to structure, policies, machines, mechanisms, tools and equipment’s, departmentalization raw materials etc. The non-material culture relates to feelings, attitudes, habits, beliefs etc. Material culture could be changed with less effort but non-material culture is very difficult to influence so easily. It is expected that both the aspects should operate in harmony. It would be difficult to understand what would happen if a strong vegetarian Brahmin is offered Fishery Department if elected. Only disharmony and chaos can result if the two aspects of the culture are not operating in harmony. Changing strategy for handling people, strategy for getting the work done, strategy for motivating employees or strategy
for getting employees cooperation are difficult to create and to operate. Once the employees are committed to certain strategies to work it would be difficult to make them work in a different manner. The organization must be strategical about creating appropriate strategies and to make them operate successfully. All activities are carried out, all the transactions take place within the organisational boundaries. The nature and type of organisation structure may facilitate or hinder various activities closed organisations for example, do not freely interact with the external environment with the result that they do not change according to compelling changes in the external environment. Consequently their survival capability may be considerably reduced. Open organisations which continuously transact with the external environment make needed changes, thereby making them viable and effective. Rule bound organisations may create more hindrances than relatively free or permissive organisations. Thus organization structure plays a very important role in making the organisation operate and function effectively. The term paradigm shift indicate that organisations have to shift to new structure, new methods or work, new policies and practices, new and effective communication network, new habits of work, all beliefs and attitudes, etc. In the face of globalization when the whole world has come under one roof, all organisations have to change in terms of all the operations, policies and practices.

If organizations are to compete successfully and if they are to remain effective they have to have provisions for making necessary changes in the face of open competition. If the organization is to qualify itself as Learning Organization it must continuously adapt itself to the demands in the external environment.

Thus organisation transformation scale may include such things as emphasis on using new and advanced technology, employees encouragement for their contribution to achieving long term goals, giving
due recognition to employees taking initiatives for Learning, commitment to continuous Learning for improvement, tendency to learn from both success and failures, availability of plenty of opportunities in day to day work, encouraging employees to share their knowledge and information freely, decentralization of power, seniors to share latest trend with their subordinates, availability of any new Learning to all employees etc.

It is understood that organizations should keep track to everything that happen around them and make necessary changes in them for successful operations.

**Table-17**

*Showing main and interaction effects on organization transformation*

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>Some of squares</th>
<th>Mean sum of squares</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status (tech vs non-technical)</td>
<td>1</td>
<td>68.571</td>
<td>68.571</td>
<td>6.717</td>
<td>Sig. at .01</td>
</tr>
<tr>
<td>Company</td>
<td>6</td>
<td>67.190</td>
<td>11.198</td>
<td>1.097</td>
<td>Not sig.</td>
</tr>
<tr>
<td>Status x company</td>
<td>6</td>
<td>88.562</td>
<td>14.76</td>
<td>1.446</td>
<td>Not sig.</td>
</tr>
<tr>
<td>Error (within)</td>
<td>196</td>
<td>2000.8</td>
<td>10.208</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Referring to Table above, it could be seen that the status effect is significant at .01 level Learning The mean score for technical job is 21.9 and that for non-technical job is 19.67. The difference is significant. Thus technical personnel are more inclined towards organization transformation than non-technical personnel Learning However both the mean scores are not on the higher side get they are closure to the mid score of 25.0.

The main effect of company is not significant. The mean scores for the seven companies range from 19.06 to 20.9. It is a very narrow range indicating much less variation between companies.

Considering, however the seven mean scores it could be said that they are not very far from the midpoint score of 25. Thus all the seven companies could be said to have marginal inclination for organization transformation. The interaction between status and companies is also not significant. The mean score of 28.8 in case of technical personnel of the GETCO. Company does indicate that the technical personnel of the GETCO Company do possess a relatively higher tendency for
organization transformation. The grand mean score of 20.7 in table 2A indicates that on the overall basis all the seven companies with their technical and non-technical personnel do not show a significantly higher level of tendency for organization transformation.

**Dimension 3: People Empowerment.**

The third dimension is pertaining to People Empowerment. The term people includes employees, Managers, consumers, alliances, suppliers and community at large. The term empowerment does not mean that power is given to needing personnel so as to make them more effective in whatever role they do. Empowerment simply means creating conditions for people so that they can operate much more effectively. Thus the term empowerment includes emphasis on development of competent work-force, delegation of powers to subordinates so as to make them learn, working together irrespective of technical or non-technical positions to learn and solve problems that arises in day to day working. Seniors discussing problems with subordinates with a view to educating them to learn in the process, giving and creating opportunities for subordinates so as to make them experiment with new technology, sharing information mutually with consumers in order to improve services, encouraging consumers and suppliers to participate in training programmes for Learning, acquisition of knowledge and skills through mutual planning by colleagues, suppliers and contractors, opportunities for participation in joint Learning programmes organized with suppliers, other groups, professionals, and academicians and continuous interaction with consumers, contractors and suppliers. All the above stated things are ways to improve knowledge and skills so as to remain viable and effective. Empowerment as a dimension for Learning Organizations is most important because it is through continually updating knowledge and skills that the organization can have a competitive advantage. It is therefore necessary that the organisation
should provide all types of facilities and variety of opportunities to employees so that they can continually update their knowledge and skills. It seems most of the organizations do not realize the importance of hidden talents and capabilities which can be brought through empowering the employees. There could be various mechanisms within the purview of organizational set up which should be exploited judiciously for employee development.

Table below shows the main and Interaction effects on empowerment.

**Table-19**

Showing ANOVA for Empowerment

<table>
<thead>
<tr>
<th>Source</th>
<th>Df</th>
<th>Ss</th>
<th>MSs</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status of Job</td>
<td>1</td>
<td>.476</td>
<td>.476</td>
<td>.068</td>
<td>Not sig.</td>
</tr>
<tr>
<td>Company</td>
<td>6</td>
<td>129.53</td>
<td>21.58</td>
<td>3.06</td>
<td>Highly sig</td>
</tr>
<tr>
<td>Status x Company</td>
<td>6</td>
<td>37.72</td>
<td>6.28</td>
<td>.892</td>
<td>Not sig.</td>
</tr>
<tr>
<td>Within</td>
<td>196</td>
<td>1380.9</td>
<td>7.04</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table – 20**

Showing mean scores for companies and status of job i.e. technical-non-technical

<table>
<thead>
<tr>
<th></th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
<th>A4</th>
<th>A5</th>
<th>A6</th>
<th>A7</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>15.6</td>
<td>16.86</td>
<td>14.53</td>
<td>16.06</td>
<td>15.13</td>
<td>14.20</td>
<td>15.26</td>
</tr>
<tr>
<td>B2</td>
<td>14.2</td>
<td>15.86</td>
<td>14.06</td>
<td>17.06</td>
<td>15.2</td>
<td>15.13</td>
<td>15.46</td>
</tr>
<tr>
<td></td>
<td>14.9</td>
<td>16.36</td>
<td>14.3</td>
<td>16.56</td>
<td>15.16</td>
<td>14.6</td>
<td>15.36</td>
</tr>
</tbody>
</table>

As can be seen from Table above technical personnel do not differ from non-technical personnel in respect of their reactions to empowerment. The mean scores of technical and non-technical personnel are 15.38 and 15.28 respectively. Both these mean scores are
more or less comparable and they are far below the midpoint score which is 25. In general it could be said that in the opinion of both technical and non-technical personnel there is nothing substantial that could be considered as efforts made by the organization for empowering the employees.

The Fraction of 3.06 in case of company is significant indicating that companies differ with respect to their views about empowerment.

From the table it could be seen that companies A2 (GSEC) and A4 (MGVCL) show relatively more positive inclination about empowerment than companies, A1 (GETCO), A3 (DGVCL) and A6 (PGVCL).

On the whole all the company means are relatively of low order and hence it could be said that in the opinion of companies serious and genuine efforts are not made by the organizations for empowering their employees. Needless to say that it is through serious and genuine efforts for empowerment on the part of organizations that they can become competent and effective.

**Dimension IV: Knowledge Management**

The 4th dimension of organization Learning relate to knowledge management including acquisition, creation, storage/retrieval and transfer utilization. When something continuously recurs and flows freely it has to be managed. Knowledge could be acquired through various means from various sources. There must be adequate mechanisms in the organization for the acquisition of knowledge. Learning through self-efforts should be encouraged so that employees with an open mind can acquire knowledge wherever it is available. Knowledge has to be created. Efforts need to be made to create new methods of doing work, new ways of making things, finding new relations among apparently unrelated things, handling everything in new and different ways as
required. Knowledge should be stored and it should be made available to all those who need it. In most of the Learning Organizations there is a mechanism known as MIS meaning management of information system. Any relevant knowledge or information is acquired stored and disseminated to departments which need it. Organizations must have adequate mechanism for the acquisition, storage, and dissemination of knowledge and information. Thus this dimension includes eagerness on the part of employees to know new methods/procedures for the systems improvement, ways of collecting internal and external information, eagerness to know how other similar organizations are effectively functioning and readiness to adaptation new and effective ways of doing things, training to employees for creativity development and for experimentation with new technology, demonstrations of practical ways for providing services to consumers, storing and coding important documents and circulars and making them easily available to the employees, awareness on the part of employees for the retention of important details acquired during the process of Learning, responsibility of the HR department for transferring important information and Learning to all departments, developing continuously new systems for sharing Learning in the organization (including strategies and mechanisms) and provisions for Learning through specific projects to generate knowledge and new methods and to implement advanced technology.

In the era of globalization no company can afford to keep itself away from the on-going trend the world over. Every company in order to survive must create internal mechanisms whereby it can keep itself abreast with the on-going trend around. Not only that the company has to acquire knowledge and information, it has stored it in the proper form and disseminates it to concerned departments. Not only this the personnel of the concerned departments have to be trained thoroughly for using and implementing new knowledge and information so as to
contribute the company’s competitive advantage. This type of involvement on the part of any company is more needed than ever before.

Table - 21
Showing main and interaction effects of company and nature of job (status of job) on knowledge management

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Ss</th>
<th>MSs</th>
<th>F</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Company</td>
<td>6</td>
<td>514.895</td>
<td>85.816</td>
<td>14.669</td>
<td>Sig. beyond .01</td>
</tr>
<tr>
<td>Status of job</td>
<td>1</td>
<td>128.076</td>
<td>128.076</td>
<td>21.89</td>
<td>Sign. Beyond .01</td>
</tr>
<tr>
<td>Company x status of job</td>
<td>6</td>
<td>102.857</td>
<td>17.143</td>
<td>2.93</td>
<td>Sig. beyond .01</td>
</tr>
<tr>
<td>Within (Error)</td>
<td>196</td>
<td>1146.66</td>
<td>5.85</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table - 22
Showing mean sources for the main and interaction effects

<table>
<thead>
<tr>
<th>B1 (Tech)</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
<th>A4</th>
<th>A5</th>
<th>A6</th>
<th>A7</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.6</td>
<td>17.5</td>
<td>13.9</td>
<td>19.8</td>
<td>19.8</td>
<td>18.2</td>
<td>19.6</td>
<td>18.08</td>
<td></td>
</tr>
<tr>
<td>B2 (non-tech)</td>
<td>15.93</td>
<td>17.86</td>
<td>13.53</td>
<td>16.93</td>
<td>18.00</td>
<td>17.8</td>
<td>16.40</td>
<td>16.52</td>
</tr>
<tr>
<td>Average</td>
<td>16.8</td>
<td>17.7</td>
<td>13.73</td>
<td>17.9</td>
<td>18.9</td>
<td>18.00</td>
<td>18.03</td>
<td>GT. 17.30</td>
</tr>
</tbody>
</table>

The mean score for the mid point of mechanism and minimum possible score is calculated to be 25.0 neither the company mean scores nor the mean scores of the nature of job reach the value of 25. In terms of this it could be said that all the companies irrespective of their technical or non-technical personnel are not so good in respect of knowledge management dimension of Learning Organizations.
Whatever level they are functioning there are some significant variations among them as can be seen from Table 4. The Fraction of 21.892 in case of status of job is significant beyond .01 level of confidence. The mean knowledge management scores for the technical and non-technical groups are 18.08 and 16.52 respectively. Thus technical personnel are more strongly concerned about knowledge management in comparison with non-technical personnel Learning Similarly the F ratio of 14.66 in case of company is also significant beyond .01 level of confidence. This means that companies vary significantly from one another in respect of their concern with knowledge management. The companies which are relatively more strongly concerned with knowledge management are A2 (GSEC), A4 (MGVCL), A5 (UGVCL), A6 (PGVCL), and A7 (GUVNL). The companies showing relatively less concern with knowledge management are A1(GETCO) and A3 (DGVCL).

The interaction effect of company and status of job is also highly significant. Thus the effect of company is not independent of the effect of status or nature of nob. Referring to the table 4A of mean scores, it could be seen that technical personnel in companies A1(GETCO), A4 (MGVCL), A5(UGVCL), and A7(GUVNL), show relatively stronger concern with knowledge management than technical personnel in the remaining companies. Non-technical personnel show relatively much less concern about knowledge management in companies A1(GETCO), A3(DGVCL), A4(MGVCL), and A6(PGVCL). These findings have to be kept in mind while creating strategy for improvement.

**Dimension V: Technology Application**

The fifth dimension pertains to technology application which includes information system, technology based Learning and electronic performance support systems. This dimension specifically involves providing Learning by effective computer-based information systems,
People having the facility to use computer for on-line working and internet, using electronic media and interactive audio visuals for imparting training, Providing software’s in the computers to employees for Learning, encouraging employees to use information technology for group Learning, employees using high technology Learning systems, coaching, and on the job training, employees working on computer with internet learn and perform better, providing freedom to design programmes on computer to meet Learning needs.

The technology application is the supporting, integrated technological networks and information tools that allow access to and exchange of information and Learning. It includes technical processes, systems and structure for collaboration, coaching, coordination, and other knowledge skills. It encompasses electronic tools and advanced methods for Learning, such as computer conferencing, simulation, and computer supported collaboration. All these tools work to create knowledge freeways.

The three major components of the technology application are information systems, technology based learning and electronic performance support systems.

**Technology subsystems (Fig : 19)**
Information system refers to the computer based technology that gathers, codes, stores and transfers information across organisation and across the world. It is the readily available information through computer which can help even in deciding the strategy for achieving the goals specified in the mission statement of the organisation.

Technology based Learning involves the utilisation of latest techniques of Learning such as video, audio and computer based multimedia training for the purpose of delivering and sharing knowledge and skills.

As electrical utilities have to achieve international standards, latest training techniques are to be adopted to perform the best to achieve the standards.

The third important component in Electronic performance support systems (EPSS). These use data (text, visual or audio) and knowledge bases to capture store and distribute information throughout the organisation so as to help workers reach their highest level of performance in the fastest possible time, with the least manpower utilisation. EPSS consist of several components including, but not limited to, interactive training, productivity and application software, expert, and feedback systems.

EPSS can help build a Learning organisations infrastructure to make Learning organisations function more effectively.

It leverages the working inherent intellectual and social skills by presenting information, knowledge, advice and support at the moment of need.
Now-a-days, internet has brought entire world at our table. Any information sought can be searched from the internet. Location of problematic site can be traced with the help of GIS (Geographical Information system) within no time.

GIS has brought revolution in the power sector in number of ways.

With the help of GIS, following problems can be attended speedily.

(i) Fault location
(ii) T&D loss reduction
(iii) System improvement
(iv) Transformer augmentation
(v) Consumer Complaints

Once the GIS of a particular area is complete, it gives following information at one click on the computer.

(a) Location of sub-station
(b) Name of the 11 KV feeder on which consumer is given power
(c) Location of the transformer i.e. identification of transformer on which consumer connection is there.
(d) Location of LEARNINGT. Circuit
(e) Location of LEARNINGT. (low tension) pole.
(f) Consumer connection from the LEARNINGT. Pole.

In the process, the consumer number of the company is sufficient. As soon as consumer intimates its name and number (given by the electrical utility), person at call centre identifies the above details by feeding only these two details in the computer and the same are passed on to the sub-division line staff engaged for maintenance of the power supply.
The above system is so useful that in old days when fault could be attended in hours, now it can be attended in minutes.

In spite of the latest technology available in the form of internet and mobile, electrical utilities are not able to implement it in the proper form. The best example is Railway before us where every function is ‘On line’.

Efforts are being made in power sector also where any consumer can know status of his application on his mobile.

It is observed that if our mobile number is given to bank then any transaction carried out in our account, immediately the message is obtained in the mobile. Likewise for Railway reservation, by sitting at home we can book the railway ticket of our choice (subject to availability) and confirmation is received within no time. It is the recent experience of the researcher that on line registration was done to renew the Passport. On the due date all formalities were completed by computer entries on Thursday and Saturday SMS received on mobile that Passport is despatched vide such and such number, and finally Passport was received on Monday. Now just compare the same with old procedure, it is beyond imagination.

Likewise in Power Sector also all such facilities can be provided to consumers and efforts are also being made to provide such facility which will make both company and consumers comfortable and happy.

The table below shows analysis of data based on 5th dimension pertaining to technology application.
### Table - 23

Showing main and interaction effect of company and nature of job (status of job) application of technology, dimension of learning organisations.

<table>
<thead>
<tr>
<th>Source of variance</th>
<th>Degrees of freedom df</th>
<th>Sum of squares Ss</th>
<th>Mean sum of Squares MSs</th>
<th>Ratio</th>
<th>Signification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Status of job</td>
<td>1</td>
<td>39.43</td>
<td>39.43</td>
<td>4.558</td>
<td>Sign. .05</td>
</tr>
<tr>
<td>Company</td>
<td>6</td>
<td>500.98</td>
<td>83.49</td>
<td>9.65</td>
<td>Sign. Beyond .01</td>
</tr>
<tr>
<td>Status X Company</td>
<td>6</td>
<td>204.2</td>
<td>34.033</td>
<td>3.93</td>
<td>Sig. Beyond .01 level</td>
</tr>
<tr>
<td>Error within</td>
<td>196</td>
<td>1695.86</td>
<td>8.65</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

### Table - 24

Showing mean scores of Status of job and company.

<table>
<thead>
<tr>
<th>Company</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
<th>A4</th>
<th>A5</th>
<th>A6</th>
<th>A7</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>19.9</td>
<td>19.0</td>
<td>20.5</td>
<td>21.46</td>
<td>20.53</td>
<td>17.46</td>
<td>22.33</td>
</tr>
<tr>
<td>B2</td>
<td>16.40</td>
<td>20.8</td>
<td>22.2</td>
<td>21.06</td>
<td>20.13</td>
<td>16.6</td>
<td>19.0</td>
</tr>
<tr>
<td>AV</td>
<td>18.16</td>
<td>19.9</td>
<td>21.36</td>
<td>21.26</td>
<td>20.83</td>
<td>17.03</td>
<td>20.66</td>
</tr>
</tbody>
</table>

As can be seen from table above the F ratio of 4.558 in case of status of job in significant at .05 level of confidence. The mean scores for technical and non-technical personnel are 20.32 and 19.45 respectively. Although both the mean scores are quite low, they do not even reach the level of 25 representing the midpoint. However relatively the mean score of 20.32 in case of technical personnel is higher than the mean score of
19.45 in case of non-technical personnel Learning Technical personnel by virtue of the nature of their job are stronger in their inclination for technological application.

The Fraction of 9.65 in case of company is significant beyond .01 level of confidence. Thus there seems to be a significant variation among companies in their inclination for technology application. Considering the mean scores companies A3 (DGVCL), A4 (MGVCL), A5 (UGVCL) and A7 (GUVNL) are more strongly inclined for technology application than the companies A1 (GETCO), A2 (GSEC) and A6 (PGVCL).

It could also be seen from table 5 that the interaction of status of job and company is also significant beyond .01 level Learning So far as the mean scores at each company level are concerned non-technical personnel relatively show higher level of inclination for technology application at company A2 (GSECL), and A3 (DGVCL) whereas technical personnel are more strongly inclined for technology application in companies A1 (GETCO), A6 (PGVCL), and A7 (GUVNL).

Thus the effect of company is not independent of the effect of status of job.

**Findings from Checklist Administration**

*Interpretation of results based on check list administration.*

All the five dimensions of learning organisation relate to important aspects of learning organisation. The questionnaire was designed to study the organisation, that is, up to what extent it could be considered a ‘Learning organisation’.

The five dimensions included in the study covers all the essential departments of the organisation. It was also felt that some other related details, reflecting organisation’s capability to be a competent
and learning organisation, should also be brought out. Accordingly a 'check list' asking direct questions to the respondents was devised.

It can be seen that the checklist statements seem to be related with the statements in the questionnaire.

As already pointed out the checklist items also relate to major dimensions of Learning organisation which dimension is reflected in which check list item is indicated in each check-list item. The responses given to the check list items and those given to the main questionnaire could be considered for the extent of natural support.

Below are given item wise frequency distribution of answers of respondents:

1. **Data Bank for easy access of information:**
   
   Total response (YES – 53 - 25% / NO-157 – 75%). Out of total 210 respondents only 25% agree that data bank is available, remaining 75% do not find such facility in the organisation.

   While studying the responses of the companies separately, it is observed that except Non-technical employees of the GETCO (Y-6, N-9) no other company more than 30% employees have stated that they have data bank.

   Now comparing the various statements which are similar to getting information on hand in the different dimensions, it can be observed that except GETCO. No other company has response rate more than 50% for easy access of information. In GETCO in dimension No. 1 statement no. 10 has score of Tech. 40/60 and Non-Tech 37/60, but for other similar statements the percentage of respondent is less than 50%, and therefore it can be revealed that accessibility of information is there to a very negligible extent as reported by about 25% respondents of all the companies.
(2) Coaching/Mentoring and guidance by the seniors.

YES – 69 / 33%  NO – 141 / 67%

It is one of the important motivating factors for the employees. When seniors nurture the subordinates and take care of them as family member, it creates very healthy atmosphere for doing work and creates a working culture in the organisation.

Over all 33% agree that they get guidance from the seniors, who is alarming and it shows that there is a gap between seniors and their subordinates. When separate company results are assessed, only in GETCO company app. 50% of the technical officers agree that they are taken care by seniors, and up to 40% of the technical officers of UGVCL agree that they are guided by the seniors.

In all other companies the response is not encouraging. Non-technical employees of all the companies are not satisfied with the seniors, as response is 33% in all the companies.

On the whole it appears that the seniors do not seem to cater to the needs of subordinates adequately.

(2) Use of performance appraisal for Learning/growth of employees:

YES - 40 / 19%  NO – 170 / 81%

Performance appraisal generates useful information about employees and the actual nature of their duties.

Performance appraisal is powerful tool to assess the employee but it seems that not a single company is using it properly for Learning/growth of the employees.

GSEC employees (26%) responded otherwise all other company employees have responded below 20% that Learning is considered in p.a.
In MGVCL, only one engineer found that performance appraisal is used for Learning/growth of employees. It is surprising that MGVCL is considered as one of the best electrical utility of country.

The same aspect is covered in the statement 3 of dimension No. II of the questionnaire, as recognition of employees for taking initiative for Learning. Surprisingly 80% of the engineers of DGVCL support that they are recognised for taking initiative for Learning. May be this recognition may be in other form than assessing through performance appraisal Learning

Otherwise all company employees (not more than 50%) responded that employees are recognised for taking initiative for Learning.

It is unfortunate that such an important tool like PA is not properly implemented in different companies.

(4) “Learning Attitudes” of employees is included in the performance appraisal.
YES – 55 / 26%                  NO – 155 / 74%

So far as the inclusion of learning attitude in the PA form is concerned most of the respondents have opined that it is not included. Percentage variation across various companies indicating positive response is not at all encouraging. This fact is also supported in the questionnaire.

(5) Knowledge management and Learning organisation concepts in the training programmes.
Response:            YES – 59 / 28%                NO – 151/72%

In all companies response for ‘Yes’ varies from 28.5% to 205. Knowledge management now-a-days is very important
concept which any organisation should include in its training programme. To remain in competition it is essential to have knowledge management and Learning organisation concept.

Its corresponding statements in the questionnaire also shows very poor result i.e. the extent to which it is there in the organisation. Only GETCO employees (in item No. 1 statement No. 3 approximately 65%) agreed that the said concept is included in the training programmes.

In general it is felt that important concepts like knowledge management and Learning organisation are not importantly focussed for proper assessment of the entire training schedule during the year.

(6) Exposure of top leadership to the knowledge Management and Learning Organisation Concepts.

Response  YES – 58/27.6%  NO – 152 / 72.4%

It can be observed from the responses that the exposure of leadership knowledge management and Learning Organisation Concepts is very poor. As the subject is new to the Indian Organisations, it is obvious that top leadership might not be having exposure. But the respondents who have given reply in ‘Yes’ they might be from top management and must be having belief in these concepts.

Responses in the corresponding dimensions also show below average result.

In general except some stray variation in different companies it is observed that top leadership exposure to knowledge management and to Learning organisation concepts is poor. There does not seem to be any mechanism in the
organisation where by top leadership can be exposed to important concepts like knowledgement and to Learning organisation.

(7) On the job Training:

YES – 138 / 65.70%  
NO – 72 / 34.3%

After getting very low scores in the first six facilitators, here reply pattern is quite reverse. In this facilitator 65.7% of the respondents agree that they are given on the job training. It is a good sign for the building of a Learning organisation.

26% to 33% of the respondent employees do not agree that they get on the job training.

It is possible that concept of on the job training is not understood properly and might be thinking that on the job training must be a part of training programme, which is not the case. It is the training given to the employee after his joining to the position he has been given.

In the corresponding statement No. 6 of Dimension No. V, scores are more than 50% which verify the check list response up to certain extent.

(8) Availability of Information regarding advanced technology.

Resp:  
YES – 148 / 70%  
NO – 62 / 30%

It is the information technology, which has brought revolution in every sector of the business. The entire world is on our table through internet. It seems engineers of GSEC, GETCO and MGVCL are using such technology more and more to get the information regarding advance technology. 80% of the respondent engineers of GSECL, 87% of the respondent Engineers of GETCO and GUVNL and 80% of the respondent Engineers of MGVCL have agreed that the information regarding advance
technology is available to them. But at the same time 74% of the respondent Engineers of PGVCL & DGVCL and 66.6% of respondent Engineers of PGVCL also agree that they also get information regarding advance technology.

It is possible that these Engineers know how to use I.T. to get required information or they must be getting journals regarding development in Power Sector.

The corresponding statement No. 9 of dimension II in the questionnaire is responded by more than 50% of the respondents. (9) Availability of literature on the best practices of electrical utilities in the world.

Response: YES – 144 / 68.6% \hspace{1cm} NO – 66 / 31.41%

Overall response is somewhat identical to facilitator (No. 8). The reason might be that those Engineers who can get information regarding advance technology can get information and literature on the best practices of electrical utilities in the world.

Likewise earlier facilitator, 87% of the respondent Engineers of the GSECL and GUVNL believe that they get literature in the company. Whereas 80% of the respondent Engineers of MGVCL get literature. 74% of the respondent Engineers of GETCO and DGVCL also get such literature. Out of all companies again UGVCL with 66% score is the last company to get such literature, which also verifies the earlier facilitator score.

The Corresponding statement is statement – 9 of Dimension II. Likewise earlier facilitator UGVCL has lowest score of 16 out of 40, which verifies the score on this facilitator.
On the whole it appears that generally engineers are getting required information and literature to update their knowledge regarding best practices of electrical utilities in the world.

(10) **Department Libraries:**
Response: YES – 42/20% NO – 168/80%

In the erstwhile GEB, there was a centralised library in the Head Office. After formation of the companies, the said library is shifted to the Training Institute of GUVNL.

Now only trainers are using this library and that must be the reason that all the companies gave negative response in this facilitator, only GUVNL employees (Tech-875), Non-Tech 66.6% gave positive response to this facilitator.

Out of other six companies, only GSECL Engineers feel they have library (20%) otherwise there is no response for having library in their company.

A somewhat similar corresponding statement – Statement No. 6 of Dimension IV also got response of less than 50% of the total score from all the companies; except non-technical employees of DGVCL & UGVCL, who gave more than 50%. They must have referred the records and documents available with company.

(11) **Domain related knowledge training to the employees:**
Response - YES – 129/61.5%) NO – 81/38.5%

In all the companies, as per response received, domain related knowledge is given to the employees varies from 50% to 74%.

The main reason to get some what good response is the information/details available on the company’s website. Now all
the employees are using company’s computer to surf on website for different information.

Even application for leave has to be submitted online and therefore employees are used to see company’s website and are trained regarding domain related knowledge.

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

Response  YES – 81/38.5%  NO – 129/61.5%

Except GSECL (Yes – 66.66%) Engineers and GETCO (Yes – 60%) engineers all others have responded poorly on the facilitator.

Even PGVCL and UGVCL have responded very poorly (yes – 20% only). It shows that authority and senior Engineers are not bothered to collect such case studies of Power Sector to enrich the knowledge of their employees.

Many times case studies become ready-beckoner for solving the problems arising out of the day to day working.

It gives confidence to the employees to solve problems.

In fact there is nothing in the organisation by which systematically case studies are prepared and made available to employees. Case studies are an important source of information for solving problems that might arise from time to time.

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

Response:  YES – 30/14.3%  NO – 180/85.7%

From the results, it seems that no company of the GUVNL companies has provision for separate funds for further education of the employees. Except GUVNL company respondents (Tech
Yes – 26%), (Non-Tech Yes -33.33%) no other company respondents have stated that there is a separate fund (Yes 20%).

There is provision of allowing employees to go for further education, if it is sponsored by any Govt. Agency. Therefore it seems that whatever positive response is there that might be derived from the above provision.

The corresponding statement which has similar meaning to that of this facilitator is statement No. 7 of Dimension No. I. Which states ‘adequate help to support Learning’. Except UGVCL (34/60) and DGVCL (30/60) Engineers, no other company employees have more than 50% response rate.

(14) **Exposure to the advanced technology of other companies to the employees:**

Response: YES – 97/46% NO – 113/54%

This facilitator can be interpreted for the companies of GUVNL and for the companies in the country. The respondent employees have meant the companies within the Gujarat, as response is good by some of the companies as under:

UGVCL and GUVNL up to the extent of Engineers 66.665 have supported that they are exposed to the advanced technology of other companies.

MGVCL employees Tech. Yes – 60% and non-tech. Yes – 53.3% have also supported the statement up to a certain extent.

Surprising GSECL and GETCO employees which have higher positive response in other facilitators, have low (40 to 26%) response rate.
The corresponding statements in the questionnaire which are somewhat near to this facilitator are statement No. 9 of Dimension II and Statement No. 3 of Dimension IV.

Except UGVCL (16/40) all company Engineers have given credit to their seniors for sharing the information regarding latest trend in the power sector.

As far as interest of knowing developments in other companies (Statement No. 3 Dimension IV), Engineers of DGVCL (24/40), UGVCL (25/40) and GUVNL (21/40) have scoring more than 50, otherwise all have opined to the tune of below 50%. Meaning thereby either all respondent engineers of other companies are sufficiently knowledgeable, or they are not interested to the developments of other companies.

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

Response: YES – 56/26.7% NO – 154/73.3%

Now-a-days, no organisation can survive without R&D activities in the technical field. Surprisingly except GSEC (Yes-60%) all other companies’ employees have denied that they have R&D activities, as percentage range from 13% to 26% only in favour.

The corresponding statements in the questionnaire are statement No. 4 of Dimension No. IV and statement No. 9 of dimension IV>

If combined result of both the statements are seen then, MGVCL, DGVCL and GUVNL only have more than 50% response rate. Otherwise all company respondents have given less than 50% for the R&D activities.
In general the tendency for the adaptation and use of R&D activities is very poor. In fact this is one of the most important activities promoting development of the company.

(16) Incentives to the employees for innovative ideas:
Response: YES – 48 / 23%  NO – 162/77%

From the result it seems that except GUVNL no other company is getting good incentives for innovative ideas or for their performance. Because only GUVNL employees (Tech – Yes 40% Non-Technical Yes – 46.6%) have responded to the tune of more than 405, otherwise all other companies are ranging from Yes 6.5% to 20% (only GSEC – Tech/UGVCL non-Tech Yes-33.3% and UGVCL Tech and DGVCL Non-Tech Yes – 26.00%).

The corresponding statement in the questionnaire is statement No. 7 in Dimension I where surprising except DGVCL and UGVCL Engineers have scored 50% otherwise all other company employees have less than 50% which shows that there is no concrete policy of incentives for innovative ideas in all the companies.

Motivating employees through providing incentives for giving innovative ideas is the most important mechanism for the involvement of employees. Unfortunately the response rate is not very encouraging. More than 70% of the respondents have stated that there is nothing like inviting and acknowledging their innovative ideas in the organisation and therefore most of them fall in a routine.

(17) Motivation and permission of further studies (Academic degrees) to the employees:
Response: YES – 145/69%  NO – 65/31%
The results are very encouraging as far as this facilitator is concerned. Minimum score is Yes – 60%, GETCO engineers, DGVCL Engineers, DGVCL-non-technical (The only lowest score is PGVCL non-technical Yes-53.3%). MGVCL is highest score Tech. Yes-87% because it is learnt that officers from MGVCL are sent for further studies regularly. Non-technical respondents of MGVCL also agreed (66.66%) that employees are motivated for further studies. GSECL as usual has good score on this facilitator also Tech-74% and Non-tech – 67% supported that employees are motivated. Overall majority of the respondents from all the companies agreed that the employees are motivated for further studies, which is again a good sign for building a ‘Learning Organisation’ by injecting a habit of continuous Learning in the employees.

(18) Problem solving discussed in groups.
Response: YES – 107/51% NO – 103/49%

It can be seen from the results that GUVNL and UGVCL Engineers have responded for problem-solving in groups. GUVNL Yes -74%, UGVCL Yes 66.66%. The rest of the company Engineers i.e. GSECL – Yes 53.3%, GETCO – 60%, MGVCL-60%, DGVCL Yes-53.3% PGVCL-60% having opined for below 605.

The overall picture of responses is not bad also. It is the sign of participating management, where employees get a sense of responsibility, motivation, building of courage and self confidence, quick decision etc.

The lowest response rate is from MGVCL and UGVCL non-technical (yes – 33.3%). Either they might not be having problems
at large or it is avoided to discuss the problems in group but getting solutions single handed.

It is a healthy sign that people get opportunities for group discussion group sharing. Considering the response rate of yes response the results are quite encouraging.

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

Response: YES – 127/60.5% NO – 83/39.5%

In power sector mainly two types of trainings are imparted to the employees of the companies:

(a) Technical (b) Human Relations. Likewise seminar/conferences are arranged on the above two subjects.

It seems that technical seminars are arranged less compared to seminars/conferences arranged on management subjects and therefore response received is better from non-technical employees. (66.66%) and GUVNL Engineers (74%). Except GSECL Engineers all other company engineers have opined that these are arranged up to the extent of 60 to 40%, whereas non-technical employees in GSECL (80%), GETCO (74%), MGVCL (66.66%), DGVCL (60%), UGVCL 60% and GUVNL (66.66%). Who have opined in favour of such seminars etc. Are above 60% in all the companies.

It is obvious that being technical organisation Engineers are extremely busy in day to day working and therefore neither they can arrange such seminars nor they attend such seminars/conferences. At the same time Seminars are often arranged on management side and officers on non-technical side are comparatively free and can be sent to attend such seminars and therefore the response is better from non-technical officers.
It is again a healthy sign that Seminars/Conferences are organised for important innovative ideas.

(20) Practical training on equipments during training programmes:

Response: YES – 48/23% NO – 162/77%

Response in this facilitator is shocking surprise. As GUVNL companies are purely technical organisation, where electricity business is carried out with the help of electrical equipments (major and minor both) Generators at the Power Station to Energy meter of consumer end, all the equipments used are highly technical and are with latest technology.

Results are not encouraging. All the company employees have responded in one voice that hardly practical training is imparted on equipments in training programmes.

Even from MGVCL and UGVCL one Engineer each only responded that practical training is given. Some of these questionnaires were administered during training programmes in the training Institute of GUVNL, it was pointed out by the participants that there is no such training programmes where details of the equipments are explained in the training programmes.

GSECL Engineers might be getting practical training in the power stations and therefore their positive response is highest (46.6). Otherwise response from remaining companies varies from 6.66% to 33.33% only for the technical training in the training programmes.

On the overall basis it could be seen that replies received while administering the checklist are not encouraging.
The facilitators are selected in such a way that these make the essentials for any organisation to become ‘Learning Organization’. As such these 20 Learning facilitators are most important factors for the employees for their motivation for Learning.

Out of 20 facilitators “except those related to

7) On-the-job training,

8) availability of information regarding advanced technology,

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

14) Exposure to the advanced technology of other companies to the employees,

17) Motivation and permission of further studies (academic degrees) to the employees

19) seminars/conferences on innovative idea in power sector.

majority respondents have denied for existence of remaining facilitators in the organization. Facilitator No. 18 viz. Problem solving discussed in groups, is found in almost all the companies.

The facilitators which are responded more or less negative, include the following:

- Data bank availability

- Proper guidance by the seniors.

- Proper use of Performance Appraisal to find out learning aptitude of the employees.

- Imparting training for knowledge Management, and Learning organisation
• Departmental libraries
• Research & Development
• Incentive to the employees for innovative ideas
• Separate fund for further education of the employees
• Practical training on the electrical equipments

All the companies do not have above facilitators.

GSEC & GETCO respondents have shown their satisfaction up to certain extent for the existence of above facilitators in their respective companies.

Distribution companies picture is also not encouraging for the existence of these facilitators in their respective companies.

Responses for the following facilitators are comparatively good.

- On the job and domain related knowledge training.
- Information regarding advance technology
- Motivation and permission for further studies.
- Seminar/conferences on innovative ideas in the power sector.

Moreover, scores in the corresponding statements in the respective dimensions in the questionnaire are also matching with the responses received from administering the checklist.