Chapter 6: Organisational Learning
6. Organisational Learning

6.1 Introduction

Learning plays a significant role in the success of a software organisation. As mentioned earlier, technology development in the information technology industry is very fast and knowledge is widely distributed among the key players of the industry. The key input factor for this industry is human resource and key performance factor of human resources directly depends upon the learning potential and the knowledge-base that people possess in an organisation at a given point of time. Learning directly influences the performance and productivity of an organisation and thus plays an important role in software development. In the context of interorganisational learning mutual or reciprocal exchange of ideas and knowledge takes place and both the organisations benefit from the learning process. The significance of learning in software organisations can be assessed from the following excerpt from an interview with a chief knowledge officer of a big software service company:

"To ensure that the entire work force is kept abreast of updates in process and technology, we implement the following procedures - A target of seven man-days of training per employee per year and training programmes ranging from Java to Yoga, aimed at overall development; Facilities to enhance individual skills and growth opportunities of employees; An atmosphere of easy, all-round communication with open-meetings between the chief executive and all levels of employees and Problem solving is treated as a collective responsibility where the rewards are shared among all ranks"
6.2 **Collaboration and Learning**

Companies pursue collaborations for a variety of reasons: to reach new customers and access new technologies, to pool capital, to share and reduce risk. Today, a new, and equally compelling reason has emerged: A growing number of companies are designing collaborations to do something *more*—that is, to change their organizations from being static organisations to learning organisations. Through collaborations, these companies aim to learn new ways of doing business to gain insights into everything from specific market segment needs, to new technologies and innovative production processes. Companies that continue to focus solely on traditional alliance goals are shifting their focus to acquire new skills and knowledge.

While learning has always been an element of collaboration, traditionally it has been more or less a secondary concern. Now more organizations are making learning an explicit collaboration goal, right alongside the well-established economic objectives. Furthermore, this kind of learning is fundamentally different from the exchange of proprietary information typical of the joint ventures of earlier decades. The nature of alliances has fundamentally changed and in the present era there is far less incentive for one party to take advantage of the knowledge capital of the other through temporary alliances, because of an explicit intention to create shared value in the near term and more effective relationships in the future.

In the most recent Accenture Annual Alliance Issues and Trends survey, learning was cited as a critical goal in 41 percent of the alliances maintained by respondents, a fraction expected to exceed 50 percent by 2000. (Palmer, 2000)
The deliberate focus on learning appears to be closely related to success with collaborations. The survey identified alliance "winners" that is, executives who report high levels of satisfaction with alliances and whose alliances have resulted in increased value. Results showed that such winners are almost five times more likely than non-winners to include "learning" as an explicit goal for their alliances. More than 80 per cent say that they have evaluated the changing nature of alliance learning and adjusted their practices accordingly, compared to just 37 percent of non-winners. And surveyed alliances that have explicit learning objectives ultimately generate twice the market value, on average, than non-learning-oriented alliances. (Palmer, 2000)

6.3 Reasons for Learning

Every organisation has its own reason to learn or not to learn. All the software companies in the study have agreed that learning is the key differentiating factor of success and this was stated by a human resource manager of a multi-national company:

"Only the learning organisations can cater to today's dramatic demands quickly and not only will the global market reward learning, it will severely punish the lack of learning"

When asked about the reasons for the organisational learning as many as 11 (34.37%) companies have mentioned fulfillment of partners requirement as the prime reason followed by six (18.75%) as improvement of productivity & performance, another six (18.75%) as new technology, five (15.63%) as product purchase and four (12.5%) as catching up with market requirements as their first priority. In the second priority 13 (40.63%) companies have mentioned that new technology has driven them to go for organisational learning
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followed by 10 (31.25%) as productivity & performance improvement, five (15.63%) as product purchase and four (12.5%) as catching up with market requirements as the reasons for organisational learning. In the third priority 17 (53.13%) companies have mentioned product purchase, six (18.75%) as productivity & performance improvement, four (12.5%) as catching up with market requirements, three (9.37%) as new technology and two (6.25%) as fulfilling partners requirement. (see Chart No 6.1) Finally the real need for learning was explained by a CEO of a software company in the study who returned from London:

"Organisational learning is essential because, only it can survive tomorrow's 'knowledge-based economy, only it can manage tomorrow's intense global competition, only it can cope with tomorrow's rapid fire technological changes, only it can handle tomorrow's demanding and fragmented markets and only it can build a people-based work system in a company"

Chart No 6.1: Reasons for Learning
6.4 **Nature of Collaboration in Learning**

The focus areas of the collaborating company form the primary business concern of the collaborator company. The software companies have entered into collaboration with different companies for the purpose of organisational learning and the focus areas of these collaborators are as follow: Software development, education & training, research & development, product selling, consultancy, individual and others. Majority of the software companies collaborate with training institutes in the same city. This is evident from the statement made by the head of corporate learning center of a major software company:

"We have identified the best software training institutes in the city for each technology area and our company has entered into collaboration with these companies for specific areas. For example, for all Microsoft technologies we have three partners who will cater to our training needs round the year."

In the first priority 27 (84.37%) companies have collaborated with educational & training companies followed by four (12.5%) with software development companies and one (3.13%) with any other company. In the second priority 19 (59.37%) companies have collaborated with product selling companies followed by two (6.25%) with research & development, another two (6.25%) with consulting and one (3.13%) with any other company. In the third priority 14 (43.75%) companies have collaborated with product selling companies closely followed by 12 (37.5%) with consulting companies, two (6.25%) each with software development and research & development, one (3.13%) each with individual and any other company. (see Chart 6.2) Some companies in the study have gone beyond the traditional methods of learning and entered into collaboration with organisations in different fields to explore the new frontiers of technologies. The following statement from
the annual report (2000) of Satyam Computers Services limited, Hyderabad makes this point clear:

“Bioinformatics is a growing industry, and IT has a significant role to play in its growth. Satyam has focus on building new competencies in this field, through a strategic alliance with Center for Cellular and Molecular Biology, Hyderabad (CCMB) – a world recognized bio-tech R&D organization. CCMB will bring domain expertise to the alliance whereas Satyam will manage the client relationship and the business unit. Satyam is also aligning itself with leading universities in India and abroad to offer continuous training to its associates in this area.”

Chart No 6.2: Nature of Collaborative Learning

6.5 City/Country of incorporation of collaborating company

City/country of incorporation of collaborating company is the city/country in which the collaborator company is incorporated or located and will indicate the reach of the collaborating company (Indian) in selecting a learning partner. Collaborators of the
companies in the sample are distributed across the world, including Hyderabad and three oldest collaboration relationships for learning (in terms of date of commencement) are considered for the present study. Majority of the collaborating companies for organisational learning were located in Hyderabad. In the first priority as many as 28 (87.5%) companies were Hyderabad-based and four (12.5%) are in other countries. In the second priority 17 (53.13%) were Hyderabad based, eight (25%) were based overseas and seven (21.88%) outside Hyderabad in India. In the third priority there were 14 (43.75%) companies that were located outside Hyderabad within India, 10 (31.25%) foreign based and eight (25%) were Hyderabad based. (see Chart No 6.3)

**Chart No 6.3: City/Country of incorporation of collaborating company**

<table>
<thead>
<tr>
<th>City / Country</th>
<th>Collab1</th>
<th>Collab2</th>
<th>Collab3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyderabad</td>
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<td>17</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>India</td>
<td>0</td>
<td>7</td>
<td>14</td>
<td>21</td>
</tr>
<tr>
<td>Foreign</td>
<td>4</td>
<td>8</td>
<td>10</td>
<td>22</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
<td>32</td>
<td>32</td>
<td>96</td>
</tr>
</tbody>
</table>

### 6.6 Learning Methods

Learning methods are those which are adopted by the collaborating company in the process of acquiring the knowledge and skill for software development. Some of the most
significant methods are in-house-self, outside collaborative and product purchase training. In-house training is training people with the help of expertise of people within the organisation. This method is essentially used to train newly recruited people as trainees and the experienced people in the company are used to train these trainees. Outside training is essentially used to acquire particular skill required to develop a specific software when in-house expertise is not available in that area. Collaborative training is used when the company makes use of the collaborating company's experience in the technical areas for developing software. This is done by interactive learning methods between the collaborator and collaborating companies. Product purchase training is used when a company purchases a particular tool or product from a collaborator company, the collaborator company sends some of its experienced people to train the collaborating company people in that specific technology domain. Each learning method is best suited for a specific nature of technology and this was explained by a corporate trainer in a corporate training institute:

"In-house training is suited for old and established technologies where many people are available internally; when companies have no infrastructure and trainers, outside training is best suited and collaborative learning is best suited for platform based technologies like Microsoft, Oracle, Java and IBM"

Majority of the companies in the study are adopting collaborative learning methods and in the first priority 26 (81.25%) companies have chosen collaborative learning method followed by two (6.25%) each in-house self, outside and product purchase training. In the second priority 21 (65.63%) companies have adopted product purchase training as their prime learning method followed by six (18.75%) as collaborative, four (12.5%) as outside and one (3.13%) as in-house self. In the third priority 16 (50%) companies have chosen
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product purchase training, 13 (40.63%) as collaborative learning, two (6.25%) as in-house self and one (3.13%) as outside learning method. (see Chart No 6.4)

Chart No 6.4: Learning Methods

6.7 Organisation of Learning

Organisation of learning is the process adopted by the companies in acquiring the required skills for software development. The most important modes of learning are formal-in-house, formal-individual-outside, formal-organisational-in-house, informal-individual. Formal-individual-in-house is when an individual is identified and trained for a specific reason in specified technologies and trained in-house with the help of experienced people with in the organisation. Formal-individual-outside is same as the above but the identified individual is sent outside for the purpose of learning when the required competencies are not available with in the organisation. Formal-organisational-in-house is when a group of people are identified and trained for a specific reason in specified technologies and trained in house.
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with the help of experienced people with in the organisation. Informal-individual is when an individual is given permission to learn himself either inside or outside in specific technologies for specified reason. Majority of the companies have adopted 'formal-in-house' training method and many companies in the sample believe that it is very cost-effective and time saving. This was described by a HR Manager in a medium software company:

"When we conduct internal training with existing people (formal-in-house) it is very cost effective for us. We can use the existing infrastructure and with available experts within the company that will result in lot of time saving. The best part of it is we (HR people) can monitor the training programs and keep them under control"

Thirty companies (93.75%) in the study have formal organisational in-house as the prime mode of organisational learning in the first priority followed by two (6.25%) companies as formal individual outside. In the second priority there are 22 (68.75%) companies that have chosen formal organisational in-house mode of learning followed by eight (25%) as formal individual outside and two (6.25%) as informal individual. In the third priority 19 (59.37%) companies have chosen formal individual outside as the prime learning mode followed by 12 (37.5%) as formal organisational in-house learning mode. (see Chart 6.5)

Training Centers
Our Company has training centers at the new facility at Infocity, Madhapur with 7 training halls with state-of-art infrastructure and faculty for Computer Based Training. These will host all the Training & Development programs for our Associates.

Source: Annual report (2000-01) of Infotech Enterprises limited, Hyderabad.
6.8 **Duration of Collaboration for Learning**

Organisations collaborate for learning and the period of collaboration in number of years is expressed as duration of collaboration for learning. The duration of the collaboration for learning has been classified into four groups viz., less than 2.5 years, 2.6-5 years, 5.1-7.5 years and more than 7.6 years. In the first category there were 16 (50%) companies in the 2.6-5 years group followed by eight (25%) in less than 2.5 years group, five (15.63%) in more than 7.6 years and three (9.37%) in 5.1-7.5 years group. In the second category there were 16 (50%) companies in the less than 2.5 years group followed by 13 (40.63%) in 2.6-5 years group, two (6.25%) in more than 7.6 years and one (3.13%) in 5.1-7.5 years group. In the third category there were 16 (50%) companies in the less than 2.5 years group followed by 14 (43.75%) in 2.6-5 years group and two (6.25%) in more than 7.6 years at the time of study. (see Chart No 6.6)
6.9 Learning Program - Number of Days

The details of the learning programs of the companies along with duration of the learning program have been gathered and the number of people attended was collected. The duration of the program is classified and divided into four groups vi2., less than 15 days, 16-30 days, 31-45 days and more than 46 days. In the first priority 21 (65.63%) companies have conducted programs for less than 15 days duration followed by 10 (31.25%) companies for 16-30 days duration and one (3.13%) company for 31-45 days duration. In the second priority 24 (75%) companies have conducted programs for less than 15 days duration followed by 7 (21.88%) companies for 16-30 days duration and one (3.13%) company for more than 46 days duration. In the third priority 25 (78.13%) companies have conducted programs for less than 15 days duration followed by 6 (18.75%) companies for 16-30 days duration and one (3.13%) company for more than 46 days duration (see Chart No 6.7)
6.10 Learning Program - Number of People

The details of the learning programs of the companies along with number of days the program has been conducted and the number of people attended was collected. Number of people who attended the program is classified into four groups viz., less than 15 people, 16-30 people, 31-45 people and more than 46 people. In the first priority there are 10 (31.25%) companies in the 16-30 people group followed by 9 (28.13%) each in less than 45 and more than 46 people group and 4 (12.5%) in 31-45 people group. In the second priority there are 15 (46.88%) companies in the less than 15 people group followed by 9 (28.13%) companies in more than 46 people group, 5 (15.63%) in 16-30 people group and 3 (9.37%) in 31-45 people group. In the third priority there are 17 (53.13%) companies in the less than 15 people group followed by 9 (28.13%) companies in the more than 46 people group and 6 (18.75%) in 16-30 people group. (see Chart 6.8)
6.11 Learning Outcomes

Learning outcomes are the results of the learning programmes conducted by the software companies. The outcomes of the learning programs are as follow: skill enhancement, knowledge improvement, quality enhancement and increased expertise. In the first priority 14 (43.75%) have mentioned increased expertise, 10 (31.25%) companies as quality enhancement, six (18.75%) as skill enhancement and two (6.25%) as knowledge enhancement as learning outcomes. In the second priority 15 (46.88%) companies have mentioned skill enhancement, six (18.75%) each as knowledge improvement and quality enhancement and five (15.63%) as increased expertise as the learning outcomes. In the third priority 11 (34.37%) companies have mentioned skill enhancement, 10 (31.25%) as knowledge improvement, seven (21.88%) as increased expertise and four (12.5%) as quality enhancement. (see Chart 6.9)
From this, we conclude that learning is seen by majority as an opportunity to improve one's expertise and quality of production of the company. This indicates that quality of production is more dependent on collaboration and collaborative learning and thus positively related to it. Productivity, quality that are indicators of software technology development thus seem to be positively related to organisational learning.

### 6.12 Positive Factors in Organisational Learning

There are some positive factors which contribute to the organisational learning process and they are as follow: Management commitment, employees commitment, learning opportunity, learning curve and partners requirement. In the first priority 13 (40.63%) companies mentioned partners requirement as the prime positive factor followed by 10 (31.25%) as learning opportunity, seven (21.88%) as employees commitment and two (6.25%) as management commitment. In the second priority 13 (40.63%) companies mentioned employees commitment, seven (21.88%) as learning opportunity, six (18.75%) as management commitment.
management commitment, four (12.5%) as learning curve and two (6.25%) as partners requirement. In the third priority 10 (31.25%) companies mentioned employees commitment followed by nine (28.13%) each as learning opportunity and learning curve and two (6.25%) each as partners requirement and management commitment. (see Chart No 6.10)

**Chart No 6.10: Positive Factors in Organisational Learning**

The real challenge of organisational learning was stated by a HR Manager in-charge of corporate training:

"The challenges of Organisational learning are as follow: make learning one of the fundamental values of the company; commit major resources and adequate time to training; use training to bridge the gap with the external world; integrate training into initiatives for change management; use training as a developmental tool for individuals; link organizational, operational, and individual training needs; install training systems that substitute work experience; ensure that training allows the Soft skills to bloom; use retraining to continuously upgrade employees' skills and create a system to evaluate the effectiveness of training"
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6.13 Negative factors in Organisational Learning

Similarly there are some factors that hamper the organisational learning process and they are as follow: Financial resource constraint, un-availability of expertise, time constraint, lack of planning and lack of demand. In the first priority 19 (59.37%) companies mentioned time constraint as the prime reason followed by nine (28.13%) as financial resource constraint, three (9.37%) as un-availability of expertise and one (3.13%) as lack of demand. In the second priority 13 (40.63%) companies mentioned un-availability of expertise, 10 (31.25%) as lack of planning, six (18.75%) as time constraint, two (6.25%) as financial resource constraint and one (3.13%) as lack of demand as the negative factors in the organisational learning. In the third priority 10 (31.25%) companies mentioned lack of demand, nine (28.13%) as un-availability of expertise seven (21.88%) as time constraint, four (12.5%) as other reasons and two (6.25%) as financial resource constraint. None of the companies seems to have financial constraint as the primary constraint. (see Chart No 6.11)

Chart No 6.11: Negative Factors in Organisational Learning

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Most software companies are faced with some serious issues that seem to constrain the opportunity to learn through collaborations. This was stated by a vice-president of an MNC based in Hyderabad:

"First, there is usually a limited training budget, which focuses primarily on technical training. Second, rapid change in communication and computing technology means that investments in information technology are expensive but prone to more rapid obsolescence."

6.14 Summary of Findings

Learning plays a significant role in the success of an IT organisation. As mentioned earlier technology development in the IT industry is very fast and knowledge is widely distributed among the key players of the industry. The key input factor for this industry is human resource and key performance factor of human resources directly depends upon the learning potential and the knowledge base that people possess in an organisation at a given point of time. Learning directly influences the performance and productivity of an organisation and thus plays an important role in software development.

Still majority of the Indian software companies learn only when there is compulsion from their collaborating partner and one-third of the companies have confirmed this factor. Only one-fifth of them are interested in learning a new technology and equal number of companies finally take it for productivity & performance improvement. For learning eighty-five per cent of the companies in the study have partnered with an education and training company to fulfil their learning requirements with ninety per cent of them being located in Hyderabad. More than ninety per cent of the companies have adopted Formal-
organisational in-house training method as this method is more productive and cost-effective. Fifty per cent of the companies have been collaborating for learning since 2.6 to 5 years. Around sixty-five per cent of the companies have conducted programs for less than 15 days duration and thirty per cent of them have conducted for 16-30 day duration. One-third of the companies preferred a training program with a strength of 30 people as this is the ideal span of control for formal-in-house training.

A quote from an interview with vice-president-human resources will summarise the essence of organisational learning-

"Organizational learning is an active philosophy and not merely an organizational system which believes that its only competitive advantage is learning, encourages people to learn to produce the results they desire, nurtures creative and innovative patterns of collective learning and develop fresh organizational capabilities all the time"