

Competency Based e-Learning Systems: An Analytical Study of Select Corporate Enterprises in Bangalore

- C.G. Sumithra*

The Target

Competency is most important nerve center for organizational functions to link to the overall performance. It aligns strategies with priorities of the organization. Corporate e-learning systems can become more successful only if, when it becomes a self-initiated program by each individual at workplace. Today's organizations are incorporating such a competency based approaches in order to be more successful to utilize the human capability at its maximum level. When these (CbceL) tools are used, it provides an opportunity for employees to document and demonstrate their target achievements at work place. The question arises what exactly is Cbcel. It is defined as follows

“Competency based corporate e-learning system is a human resource tool, which enables the corporate enterprise to map employee/team performance gap analysis and to appropriately address through learner centric e-learning courses and develop employees for the betterment of business results at a reduced cost across geographical locations”.³⁸

Personal learning plan (PLP) is addressed as a best vehicle for competency based e-learning systems. It

makes both receivers (employees) and givers (Land D and HR) understand about address the issue of prior learning, (retrospection of past learning) assessment of the present, prospecting for the future by understanding where the gap is (need to develop) choosing from the e-learning portfolio and correct method to achieve the required level of competencies.

HR department would have developed competency framework linked with KPI at various levels with the intention of (past present and future) aligned with individual jobs. The Land D shall develop the curriculum based on addressing Knowledge, and skills with the requirement for current and future. This particular concept is called as competency based e-learning curriculum (may be delivered through electronic form).

The challenge for Land D shall be about employees who are adult learners and deliver the content in the required pattern for different users. The key points they need to understand are:

- The main objective is to mold employees as self-directed learners
- Understand their diverse experiences on different kinds of learning
- Understand employees - different styles of learning
- Different methods they use to solve problems

* Associate Professor, M.P.Birla Institute of Management: Associate, Bharatiya Vidya Bhavan, Bengaluru-560 001. The thesis was prepared under the guidance of Dr.N.S.Viswanath & awarded PhD degree by Symbiosis International University, Pune in April 2014.

- Various e-Learning portfolios
- Levels of courses on each subject matter
- The best methods to test and quantify them to link to performance³⁹

However, some of the points are tested through this research. Today companies hardly measure individual results; they mostly count on team results. A study on various teams and groups based on which project they are working on and what learning content should be available for them. The HR and L&D activities have to be synchronized in order to deliver best results. All these experiments and achievements are possible only if, various individuals support and understand context. The next section discusses on adult learning and learning styles.

LITERATURE REVIEW

The secondary research conducted references of various resources like journals, reports, articles, projects and web links lead us to the following key points. The review of literature starts with understanding of corporate learning process by deriving a meaning for variables like learning and job context, streamlining the process of learning in accordance to job requirements for continuous transformation of knowledge in order to perform in the turbulent business environment. Top global organizations have included learning in their routine process with the help of technology. Many studies have contributed to the understanding of the relational phenomenon between learning and job and knowledge. The learning programs are totally different from that of school or college curriculum. Since the business environment is very vibrant, change is the only constantly occurring activity and learning keeps the employees' up to date on the current requirements.

The need driven learning has to be in accordance to learning and development orientation which should be a well-planned task. Many researches in the corporate sector indicate that, people are of strategic importance. Many authors have captured the terms lifelong learning and the "learning society" as the areas of research that contribute to the development of 'workplace learning' as a distinctive field of enquiry. The concept of workplace learning has also been summarized by many authors and researchers, that has brought out

the prominent themes like approaches to learning, formal/informal learning and insists on individuals and their learning contexts of work cannot be considered separately. There are also discussions on several aspects about work environment, work content and context of behavior.

The critical aspect of successful human resource learning and development programs in organizations is interest and active participation by employees. Careful design of this development program content cannot compensate for a lack of interest or participation on the part of employees. The authors have brought into light concepts such as growth needs, personal mastery, learning goals, and development orientation within organizational settings. Not only that, but behavioral involvement, understanding self and cultivating positive attitude are the most important challenges in today's organizational context. Some authors also relate between production and learning goals as independent (uncorrelated) and they are not opposite ends of the same continuum.

The concept of learning is addressed on diverged views by many authors although all of them converge at a position called knowledge, creativity and enlightenment of self-etc. The authors pin point on existence of hierarchical structures, groups (teams) and the realist view of objects, activities and people are associated occurrences of learning. Some researches indicate the importance of team learning and continuous learning for smooth flow of organizational process. The process of feedback has been given extreme importance in most of the researches, apart from these concepts like explicit, implicit, tacit knowledge through learning and practice has been cited with criticality.

In the study of competencies and organizational learning, the authors aim to provide a road map for competency based learning. Competencies related to learning and jobs have been paid great attention in the recent times. This has resulted in a plethora of papers and reports on assessment of competencies, definition and including their computation. In straightforward terms learning activities can be linked to scheduling and evaluating with the aim of helping employees to get some required competencies for job context. The competency gap becomes the key measurement element that is

used for action in the organization. The competency gap then addressed through learning activity may be for individual or team competency connecting to the organizational competency requirements in order to achieve objectives/goals.

However, Competency Management System (CMS) helps to identify the core competencies and linked to HR based reward and incentive programs. Some organizations allow their employees to set personalized goals linked to job roles and organizational competencies. Another important fact with regard to competency is it is linked to Performance Management system (PMS) of the Organization. Competency linked PMS is a crucial factor in measuring success of the organization.

In order to remain competitive in an ever-changing, high-tech environment, organizations are investing more money in training employees. Day by day, more and more organizations in the globe are adapting e-learning to meet their training needs because it is less expensive and it could be addressed to many people at a time across boundaries. Corporate or Workplace e-learning used as a powerful tool for training global workforce involved in career-related continuous learning, because it has the benefit of being available on-demand, at any time and at any place. Workplace e-learning also offers a unique opportunity for employees, as they can plan their learning activities at their own convenience. The training environment of workplace e-learning is such that, learners are encouraged to make their own choices about the content and information for studying. The provision of learner control in workplace e-learning gives trainees the ability to focus on selected topics with appropriately designed e-learning portal.

Most of the research studies in e-learning are about higher education, vocational studies and distance learning almost in all the parts of the world (some example countries are Italy, Korea, UK, USA and Canada). These courses include those completely dependent on the internet (with no face-to-face meetings) as well as traditional classroom-based courses with a required or optional distance learning component (including a course web site with additional online resources). Researches indicate that, positive impacts on student learning in terms of increasing

overall learning experience and their comfort with using technology. While these advances are exciting, allowing both instructors and students more flexibility and creativity within the learning process, it becomes necessary to explore how these forms of instructional technology influencing student learning. These research papers are ignored because the researchers' lucrative area is specifically concerned with corporate e-learning.

Corporate or workplace e-learning takes different forms and dimensions as the literature review suggests that convenience is the first advantage to be derived. They are TAM for e-learning, effective implementation of e-learning, acceptance and resistance to corporate e-learning, performance-oriented approach to e-learning in the workplace, impact of e-learning in workplace, the influence of learning styles on learners in e-learning environments, the effect of e-learning technology using acceptance and e-learning system service quality on organizational learning based on users' perceptions, convergence, knowledge management, training and e-learning: scenarios making it work.

Most of the researches in corporate e-learning have made use of Donald Kirkpatrick's (1976) four levels of training evaluation. They are reactions, learning, employee behavior and organizational results model. Pre-test, and post-test assessments are frequently used in the e-training courses especially several of the training solutions are formal certification courses. The background study shows that Kirkpatrick's model is more suitable for understanding training evaluation in corporate scenarios.

E-learning models are understood as one of the important areas of research, for getting a clear picture about various modes like learner centered pedagogy, PDP, complexity models of Intelligence etc. Apart from these models, learning style has identified 71 models, in which 13 models are found to be more important and most of the researches have utilized these. Some model reviews are presented like actor models, championing factors that used to capture the adult learners. The research papers also discuss on the various learning platforms models through which the content is delivered. The theory of e-learning research has also come up with customized models which are

specifically used by some organizations only. They are Personalized Adaptive Filtering systems (PAFS) and KPI models. Most commonly described models in E-learning are TAM, Unified Theory of Acceptance and Use of Technology (UTAUT) models, e-learning acceptance model, Meta analytic path model, and TAM extension models. models of constructivist VLE, competence performance approach and Adaptive Intelligent Personalized Learning (AIPL). These models are being discussed as a part of review.

The article on competencies and imitability in the Pharmaceutical Industry makes several contributions to the growing literature on competencies and resource-based view of the firm. At first, the paper addresses gap in previous studies, article investigates the impact of three different types of competencies on firm's performance. These empirical results highlight the jeopardy inherent in acquiring competencies and the importance of new learning. Competency refers to the behavior or performance of an individual. Yet does refer to the underlying "aspects of a person", such as their knowledge or skill, that "enable him/her to be competent". The focus on individual's abilities like knowledge and skill are portrayed by some authors as competencies of individuals. The concept of performance assessment plays a vital role in evaluating the employee's knowledge acquisition and achievements in the work-place. So performance assessment and competency cannot be split.

The next point is focused on bridging competencies and e-learning. The concept of learning object is the Center of new means for instructional design of web-based learning that emphasizes on reuse as a quality characteristic of learning contents and activities. The Learning objects are considered as reusable elements that can be used as part of learning designs which is understood as learning repository in electronic databases. This schematic description of

learning design gives an idea for flexibility. The specification provides in describing activitybased learning program which are addressed by some authors as goals, obstacles, actions and prerequisites. (GOAP)

The companies identify core competencies that align with the company's mission, vision and goals, encourage

employees to establish personalized objectives that allow them to develop their abilities. The company goals incorporating competencies into performance management activities demonstrates that companies connect achievement to compensation and align employee work to strategic goals. These objectives and goal achieving behavior leads to performance excellence. Most of the successful companies align competencies defined in the performance management system with the company's strategic objectives by formally linking employee development activities. The PMS ensures that knowledge transfer, succession planning and employee training needs become a part of daily operations which is called as competency based Performance management system. Competency-based learning as one component in a powerful strategy for leveraging competency models and maximizing the impact of assessments, training and performance support programs and resources. Many articles addressing competency based learning constitute the foundation for learning and depict the innate makeup of individuals and teams to achieve organizational goals which is a necessary for the future.

The key highlight of this research is to mainly focus on Competency based corporate e-learning which is considered to be highly important and crucial with e-learning systems design for delivering training to adult learners at workplace. In recent years, researchers have made attempts to integrate competency-based models into e-learning programs to allow employees to develop competencies. These studies present an approach for aligning competency based learning process with business activities via e-learning technology. The methodology describes the use of key performance indicators (KPIs) as a framework to link learning with work competencies and performance in e-learning applications. The ultimate purpose of work-integrated learning is to drive business results and to bring about positive changes in behavior and job performance. Competency-based e-learning in the workplace, is recognized for supporting a personalized learning process and facilitating peer communication and collaboration. These are the two key elements in the instructional design for learning system (Chang, 2012).

Most of the studies in competency based e-learning either takes the direction of systems view or technology acceptance model (TAM) in HR point of view among various corporate settings. Some of the literatures reviewed have been presented in the form of case studies. With respect to the methodology for data collection utilized in the literatures is questionnaires method by using snowball sampling or convenient sampling. There are very few empirical research studies found in competency based e-learning.

On the topic of competency based e-learning, various dimensions and different perspectives are discussed and presented by authors in the present literature review. Some of them are competency development in knowledge management and e-learning, To explain further, some authors capture insights into the higher order of competency based e-learning, for specific kinds of jobs. Another view brought out the concept of knowledge space theory, comprehensive skill development program for continuous and consistent assessment. The European community online suggests that, with such kinds of online program even people who are differently able can also be trained. The system architecture needs to match support for individual competency requirement.

Some authors have proposed structural equation model for understanding relationship for e-learning readiness, system quality and outcomes. There are some points contributed towards personalized e-learning environment with intelligent e-tutor. In order to categorize the levels of domains and deliver different requirements CBeL suggests multilevel, domain different skill mapping and procedural skill support. To strengthen the e-learning with improved browser category, platform independent data transformation protocol and java enabled client server a performance diagnosis methodology shall device a roadmap. TheKompetansenettet system has been designed as professional development tool for individuals.

The latest trend in e-learning is to combine KM on accessibility and reusability of intellectual assets of organization and JIT program. Another research in CBeL suggests the use of one language course with different levels of assessment with the help of rubrics. The Performance management competency model

is used for capturing behavioral measures against specifications. The idea behind capability mapping is to suggest competency focus on delivery skills that the organization needs for the future.

The CBT is the one that leverages skills appropriately, works in alignment with corporate goals and keeps people focused on the job. The major point of concern is CBT should be properly tailored else may not be of great use. The best method to understand the workable competencies is through relating employee skills with business process instead of job roles. Another method of handling CBeL is through process model which describes sequential steps to be followed to implement appropriately. The KM enabled e-learning portal which applies intelligent taxonomy in association with metadata forms a frame work of logical learning unit. The authors suggest that expert articles could be shared to the entire community and if required deliver new courses based on the expert comments.

Needless to mention that the design of e-learning is an important feature for attracting adult learners and to make them continuously use the available materials. Individual skill gap analysis will help in sequencing the learning materials and structuring learning resources. The detailed plan of competency analysis includes profile management – description, process role, actors, cases, remark etc.

Cbel is also used in Medical education and health care industries through the use of LOM (Learning Object Meta data) which developed learning objects, Advanced Distributed Learning (ADL) and Sharable Content Object Reference Model (SCORM). The reusable competency map provided power point slides, handouts, reading assignments, self-assessment quizzes at unit level. Some researches also provide details of right kind of personalized serviced delivery with sequencing orders via LOM. The learning ladder is also an important point to consider for sequencing the learning delivery. The program may contain analogies, case studies, chart and diagrams, check list, instructional games and simulations, mind maps, models, pictures, stories, self- test, quizzes, questionnaires and writing task by different styles of introducing expectation, topics, which also inclusive of sub headings, symbols and icons.

The interesting feature and latest development in this field is called as “digital competence”. The EU has clarified certain definitions about digital competence. In addition, to put forth a point on technology, the latest feature is integration of popular LMS with the system which finally reduces overall band width with data application and video sharing. The concluding remarks states that future of distance learning technology will surpass all these methods and effective integration of many more platforms and methods will be the future scenario.

COMPETENCY BASED CORPORATE E-LEARNING

Understanding the psychology of learners:

Most of the learners in corporate are adult learners hence, understanding the psychology, perception of requirements becomes a very critical aspect. Emotional processes involved in e-learning are interesting from the user psychological point of view, as they enable to deepen understanding with respect to emotionality involved when using technology. One of the leading ideas in user psychology is explanation. The theory of andragogy instructs us that the best way to assist adults in their learning includes informing them why they need to know the topic, teaching the topic using experiential learning techniques, and having the adults solve a problem that is of immediate importance to them.

Significance of professional learning calendars for employees across board: The professional learning consists of organizational need based learning, occupational requirement learning, individual learning needs and professional learning. Depending on the activity, task, skill requirement professional learning calendar need to be prepared considering the positional and individual’s development prospects.

Content Update: Content is the most essential part of e-learning. It is considered as a face of e-learning. Content is shared, reused; it may be requirement of books or games, or a model. Updating is very important. Most of the e-learning portals and servers is the content not updated due to monotony feel of learners.

Learner Centric environment: Most of the employees take up e-learning because it is tailored to the requirement of individual’s needs. It is a perspective of talent, interest, specific needs and practices.

Knowledge transfer methods (KTM): KTM covers content, quality, language, standards, mode of presentation, perspective of understanding etc.

RESEARCH OBJECTIVES

The researcher was able to identify five major objectives and five sub objectives which are listed below:

- To identify and analyze the current e-learning practices scenario in BPO sector.
- To examine the correlation between e-learning and performance.
- To analyze the current training and learning methods followed.
- To assess the potential of competency based e-learning for employee development in ITES sector.

The sub objectives are as follows:

- To identify the correlation between competency and performance.
- To identify those personal and Group Characteristics which have an influence on performance.
- To assess whether any improvement in job knowledge influences the overall performance.
- To examine corporate e-learning technology's influence on the e-learning styles.
- To identify influence of e-learning delivery methods on individual performance.

HYPOTHESES

The aforesaid objectives led to the formulation of following hypotheses:

- **H1:** There exists correlation between competency and performance.
- **H2:** There is a significant influence of personal characteristics on individual performance
- **H3:** There is a significant influence of group characteristics on team performance.
- **H4:** There is a significant influence of experience on improving job knowledge.
- **H5:** There is a significant influence of e-Learning delivery method on individual performance.

- **H6:** There is a significant influence of e-learning technology and e-learning styles.
- **H7:** There is a significant influence of 360 degree e-learning on competency.
- **H8:** e-learning increases job knowledge leading to significant improvement in overall performance.

RESEARCH FOCUS

- Organizations contribution towards employee development and performance excellence.
- Organizations commitment towards learning environment
- Competency based learning environment
- Training through electronic mode
- Understanding commitment of HR
- Understanding training methods
- Understanding about the Learning department activities

METHOD OF DATA COLLECTION

A personal hand on delivery method has been used to administer the questionnaire. This method of data collection is chosen because of the following benefits:

The researcher delivers to the potential respondents by self-administration.

The researcher can note the view points of the respondents chosen for study.

The researcher can identify other practical problems while doing the survey which may be useful for research.

Moreover, for this research this is one of the best methods to collect data because it has minimized bias in qualitative data.

Population of the study: The universe of the study is those companies which have incorporated e-learning systems in the present context. The information technology enabled services which are registered are incorporated in India form the universe. There are about 2560 ITES companies.³

Sampling Frame: There are about 560 ITES companies in Karnataka (22% of ITES are in Karnataka) that includes seven major sectors of ITES. The categories include BPO, CAD/CAM/CAE, WEB DESIGNING AND WEB SERVICES, MEDICAL TRANSCRIPTION, DATA DIGITIZATION, E-COMMERCE AND GIS.⁴For this particular research BPO is chosen as Bangalore hosts 49 companies which are wings of global IT major players.

Sampling unit: Top 20 BPO companies based on revenue generated and number of people employed.⁵

Stage 1: All the employees of ITES in the BPO sector in Bangalore were enlisted. Only the first level employees who are into process handling were taken into account for the purpose of survey.

Stage 2: A complete enumeration of learning team / heads/executives who are responsible for process of ITES in the BPO companies was done.

Stage 3: The human resources in charge for the process and the competency were evaluated through the data collection instrument.

Calculation of sample size: Bangalore population has of 2.5 lakhs, BPO/call center industry has about 28-38%: approximated value on 2, 50,000⁶ (First level employees) assumed as N = 78750.

Sample space: First level employees/executives who are into process.

Precision 10% error

Finite population correction factor= $N-1/n-i$

Determination of sample size for finite population $n = \frac{pq}{\sigma_p^2}$

$$P=q= \frac{1}{2}$$

$$\sigma_p = \sqrt{pq/n}$$

$$= \frac{1}{2} \sqrt{1/n}$$

$$\sigma_p^2 = 1/n * 1/n$$

$$\sigma_p = 0.10/3.09$$

$$\sigma_p = 0.03236$$

$$n = 0.25/.001047 = 238.777 \quad n = 250$$

(for BPO employees stage 1)

Stage 2: Learning and Development n=30 (49 companies –sample from each company)

Stage 3: HR department n=30 (49 companies –sample from each company)

Type of Sampling: Univariate Stratified Random sampling used for data collection from BPO. This is the simplest form of sample; it gives a single variable or unit of analysis. The smaller groups of strata, where in the sample has variety of attributes. The pooled strata used to choose sample from which respondents are picked at random.

FINDINGS FROM THE ANALYSIS (stage I)

- The study has validated the formal hypotheses
 - There exists correlation between competency and performance.
 - There is significant influence of personal characteristics on individual learning process.
 - There is a significant influence of group characteristics on team learning process
 - Improvement individual job knowledge has influenced overall performance although individually there is no significant improvement from e-Learning.
 - There is significant influence on corporate e-Learning delivery method on individual performance.
 - Corporate e-learning technology has significantly influenced the learning styles.
 - Two hypotheses have not been supported by the study
1. There is no significant influence of 360 degree corporate e-learning on individual competency.
 2. e-Learning although increases job knowledge has not made any significant improvement in business result.

FINDINGS FROM THE ANALYSIS (Stage II)

- Out of 19 dimensions only 7 dimensions have greater statistical significance by gender.
- E-Learning content object and e-learning usage are significantly and statistically at 10% and 15% respectively.

- Learner convenience is high for low salaried personnel as compared to higher level counter parts.
- Learning content and learning platform appears to be similar across all categories.
- The employees with higher salary levels tend to exhibit lower interests towards learning.
- In the correlation analysis in the Land D activity covering 19 dimensions there is negative and get significant association between individual performance and team psychographics.
- There is significant influence on Land D activity is e-learning stage implementation and total performance.
- The e-learning content is perceived to be making negative influence of the employees of Land D department

FINDINGS FROM THE ANALYSIS (Stage III)

- The mean levels of these dimensions suggest that females are consistently and relatively better as compared to male counterpart (N=40).
- In respect of competency development there is not much difference in terms of perception between male and female HR.
- HR people are quite competent in making performance assessment, performance duration and overall performance itself.
- Most of the HR executives are 80% highly qualified in the ITES sector. This is a good pitch for ITES sector on which functional HR can be taken up effectively.
- The dimensional variables which are suppose to make positive influence are making negative influence both at individual and team level.
- As a team their contribution is positive but not statistically significant.
- The correlation between individual and team performance with 12 dimensions of HR have been analyzed. The results not surprisingly show positive correlation.

CONCLUSIONS

As far as BPO's are concerned, the researcher' is concerned '**Competency based e-Learning**' is at a bad state of affairs, only 20% - 30% of the BPO use e-learning to some extent that too only top companies like TCS, Accenture, HP have taken up e-learning other Organizations have still to a long way to move in order to implement these methods.

This study has clearly demonstrated four factorial dimensions that would lead to capturing variations across learning. These factorial dimensions have to be considered while preparing resource materials and career planning for employees. Induction of skills and knowledge along with positive experience may help enhance efficiency of e-learning programs. The e-learning programs can be effectively delivered by taking into cognizance those attributes which will need to higher levels of efficiency at the individual level and overall performance at aggregate level.

RESEARCH LIMITATIONS

- The outcome of the study depends entirely on the fairness of information supplied by respondents.
- Paradigm shifts due to change in environmental, workplace and individual factors.
- The study is restricted to a select group of corporate enterprises in Bangalore; hence the problem of generalization
- Despite these limitations, our research investigation will expand the knowledge horizon in the e-learning domain and opens up the opportunities for the introduction of e-learning systems much to the efficacy of e-HRM and benefit both employee as well as organization.
- Sample size, through statistically calculated, not enough to make concrete projections.
- Dearth of information has always been a limitation for any study, but as far as this study is concerned, totally relied on the perception data of select employees.

FUTURISTIC NOTE

The present study is indicative of the state of e-learning in ITES organizations while there is a need for a change

in setting the trends for future, similar studies for other types of organizations may facilitate growth and development of employees and the organizations. The present study with appropriate adaptation in the instruments may be taken up to derive benefits for immediate future and long term.

BIBLIOGRAPHY

Books

- Garrot, Bob. (2000). The Learning Organization: Developing Democracy at work. Replika Press Pvt. Ltd., Kundali India. 1-5, 51-59.
- Rosenberg, M. J. (2001). E-Learning: Strategies for delivering knowledge in the digital age. New York: McGraw-Hill. 28
- Rosenberg, M. J. (2001). E-Learning: Strategies for delivering knowledge in the digital age. New York: McGraw-Hill. 30-33.
- Senge, Peter M. (1990). The Fifth Discipline: The Art and Practice of Learning Organization.
- Shermon, Ganesh (2005). Competency based HRM – A strategic Resource for Competency Mapping, assessment and development Centers Tata McGraw-Hill Publishing Company Limited. 11-13.
- Silica, Miguel-Angel., Naeve Ambjörn. (2006). Competencies and organizational Learning: A conceptual Framework. Competencies in Organisational E-learning concepts and tools. Information Science publishing (Idea group Inc), Hershey, USA. 18.

Journals

The following journals materials have influenced profoundly the line of thinking on which our research investigation is based:

- Adams, J. and G. Morgan. "Second Generation "E-Learning: Characteristics and Design Principles for Supporting Management Soft-Skills Development. "International Journal on E-Learning, (forthcoming) Retrieved on 6th September 2012. (6:14).
- Albert, Dietrich (2008). Modeling competencies for supporting work-integrated learning. Knowledge Management in knowledge work. Journal of Knowledge management. 21(6). 31-37.

- and Strategic Knowledge Management. *European Journal of open, Distance and E-learning*. 67. 1-8.
- Ashton, Chris. (1996). Case Study – How competencies Boost Performance. *Management Development Review*. 9 (3). 14-19.
 - Aslam, DanialHassan., Javaid, Tasawar., Tanveer, Asif., Khan, Mannan., Shabbir, Farooq. (2011). A Journey From Individual To Organisational Learning. (Exploring the linking bridge: Team Learning). *International Journal of Academic Research*. 3(3). 732-745.
 - Bantam Doubleday Dell Publishing Group, Inc. 139-269.
 - BPO workers: A Qualitative Study. *Communications of IIMA*. 5(2). 11-24.
 - BPO workers: A Qualitative Study. *Communications of IIMA*. 5(2). 11-24.
 - Brown, Kenneth G. (2005). A Field Study of Employee e-Learning Activity and Outcomes. (2005). *A Human Resource Development Quarterly*. 16 (4). 465-480.
 - Cho, Eunsoon. (n.d.). Development of competency based e-learning system: A case analysis of Korean IT Business. Retrieved on 30th July 2012 (7:59).
 - Cohen B. Eli., Nycz, Malgozata. (2006). Learning Objects and e-Learning: An informing Science Perspective. *Interdisciplinary Journal of Knowledge and Learning Objects*. 2. 23-34.
 - Conference Board of Canada. Retrieved on 26th July 2012 (3:32).
 - Considerations. *Journal of workplace e-learning*. 17 (5/6). 304-317.
 - Costello R., Mundy D.P. (2009). The Adaptive Intelligent Personalized Learning Environment. *IEEE Computer Society*. 38.606-610.
 - David W.S. Tai., Zhang Ren-Cheng., Chang Sheng-Hung., Chen, Chin-Pin., Chen, Jia-Ling. (2012) A Meta-Analytic path Analysis of e-Learning Acceptance Model. *International Journal of Social and Human sciences*. 6.439-442.
 - David, oye., Salleh, Mazleena., Iahad, Noor Minshah. (2012) The impact of e-learning in work place. *International Aran Journal of e-technology*. 2(4). 203-209.
 - De Carolis, Donna Marie. (2003). Competencies and Imitability in the Pharmaceutical Industry: An Analysis of their Relationship with Firm Performance. *Journal of Management*. 29(1). 27–50.
 - DeRouin, Renée E., Fritzsche, Barbara A., Salas, Eduardo. (2004). Optimising e-learning: Research based Guidelines for learner controlled Training. *Human Resource Management Weiley Periodicals Inc*. 43(2/3). 147-162.
 - DeRouin, Renée E., Fritzsche, Barbara A., Salas, Eduardo. (2005). E-learning in organizations. *Sage Management Journal*. 31(6). 920-940.
 - Dibakanaka, Anothai. Hiranburana, Kulaporn. (2012) Developing an e-Learning Competency-Based English Course Module for Chief Flight Attendants. *International Journal of Scientific and Research Publications*. 2(8). 1-14.
 - Digital Competence. European Commission Joint Research Center Institute for Prospective Technological Studies. Retrieved on 17th October, 2012. (6:36)
 - Dr. Nagarajan P., Dr.Jiji, Wiselin G., (2010). Online Educational System (e-Learning). *International Journal of u- and e-Service, Science and Technology*. 3(4). 37-48.
 - E-Learning for the work place, Creating Canada's Lifelong Learners. (n.d.). The E-learning: emerging uses, empirical results and future directions. *International Journal of Training and development*. 7(4). 425-258.
 - Emmendorfer, Janet. (n.d.) Yes you can teach soft skills through-learning. Retrieved on 22nd July 2012 (4:02).
 - Ennis R. Michelle. (2008). The competency Models: role of employment training and administration. Retrived on 15th September.
 - European Parliament and the Council (2006). Recommendation of the European Parliament and of the Council of 18 December 2006 on key competences for lifelong learning. *Official Journal of the European Union*, L394/310. (Original not seen).
 - Fenwick, Tara. (2008). Understanding Relations of Individual–Collective Learning in Work: A Review of

- Research. *Journal of Management Learning*. 39(3). 227–243.
- Fraganidis, Fotis., Mentzas Greogoris. (2007). Ontology based Competency for management for Corporate e-Learning. Competencies in Organizational e-Learning concepts and tools. Information Science publishing (Idea group Inc), Hershey, USA. 319-322.
 - Garavan, T. & McGuire, D. (2001): "Competencies & Workplace Learning: Some Reflections on the Rhetoric & the Reality", *Journal of Workplace Learning*, 13(4). 144 - 164.
 - Garavan, Thomas N. Morley Michael, Gunnigle, Patrick, McGuire David, (2002). Human resource development and workplace learning: emerging theoretical perspectives and organisational practices. *Journal of European Industrial Training*, 26(4), 60 – 71. (From Abstract).
 - Gomborg, Eric., Derryberry, Anne. (1998). Performance Improvement Environments. *Learning without Limits*. 2.16-24.
 - Harun, MohdHishamuddin. (2002). Integrating e-learning into the work place. *Journal of Internet and Higher Education*. 4.301-310.
 - Heller, J., Steiner, C., Hockemeyer, C. & Albert, D. (2006). Competence-Based Knowledge Structures for Personalized Learning. *International Journal on E-Learning*, 5(1), 75-88. (From abstract).
 - Hockemeyer, Cord ., Conlan, Owen., Wade, Vincent., Albert, Dietrich. (2003). Applying Competence Prerequisite Structures for e-Learning and Skill Management. *Journal of Universal Computer Science*. 9(12). 1428-1436.
 - Individual-and Team-Level Relationships. *Journal of Group and Organization Management*. 33(6). 657-684.
 - Khan, Badrul. H., Joshi, Vinod. (2006). E-Learning Who, What and How? *Journal of creative communication*. 1(1).61-74.
 - Knowledge Economy and Corporate e-Learning: Current and Upcoming developments in US market (2001). Retrieved on 21 September 2012.
 - Kober, Rob., Specht, Marcus. (2006). Ten Competence: Life-long Competence Development and Learning. Information Science publishing (Idea group Inc), Hershey, USA. 234-249.
 - Kumar, Phuldeep., Gulla, Umesh. (2011). Corporate e-Learning: Possibilities, Promises, and Realities. *DESIDOC Journal of Library and Information Technology*. 31(3).1-30.
 - Ley, Tobias., Ulbrich, Armin. (2002). Achieving benefits through integrating e-Learning
 - Li-AnHo, Tsung-Hsien Kuo, Binshan Lin. (2010). Influence of online learning skills in cyberspace. *Internet Research*. 20 (1). 55 – 71. (From abstract).
 - Lynne, Rabak., Martha, Cleveland-Innes. (2006). Acceptance and Resistance to Corporate e-Learning: A Case from the Retail Sector. *Journal of Distance education*. 21(2). 115-134.
 - Manochehr, Naser-Nick. (n.d) The Influence of Learning Styles on Learners in e-Learning Environments: An Empirical Study. Retrieved on 20th July 2012 (4:34).
 - Mayes. Terry (n.d.). JISC e-Learning Models Desk Study. Mungania, Penina. (2003). The Seven e-Learning barriers facing employees. A Research Report. Retrieved on 22nd July 2012 (2:34).
 - Newton, Diane. Ellis, Allan. (2005). Effective Implementation of e-Learning: a case study of the Australian Army. *Journal of Workplace e-Learning*. 17 (5/6). 385-397.
 - Pentazis, Cynthia. (2002). Maximizing e-Learning to train the 21st Century workforce. *Journal of Public Personnel Mangement*. 31 (1). 21-26.
 - Rita Mangione, Giuseppina., Orciuoli, Francesco, Anna, Saverio Salerno. (2009). Competency in e-Learning systems: a possible approach. *Journal of e-Learning and knowledge Society*. 5(3). 69-77.
 - Senge, Peter M. (1990). *The Fifth Discipline: The Art and Practice of Learning Organization*.
 - Servage, Laura. (2005). Strategizing for workplace e-Learning: some critical
 - Shermon, Ganesh (2005). Competency based HRM—A strategic Resource for Competency

- Mapping, assessment and development Centers. Tata McGraw-Hill Publishing Company Limited. 11-13.
- Shermon, Ganesh (2005). Competency based HRM—A strategic Resource for Competency Mapping, assessment and development Centers. Tata McGraw-Hill Publishing Company Limited. 43-44.
 - Sluijsmans, Dominique M. A., Prins, Frans J., Martens, Rob. L. (2006). The design of Competency Based Performance Assessment in e-Learning. *Journal of Learning Environments Research*. 9(1). 45-66. (from abstract).
 - Smith, Theodore C. (2005). Fifty one competencies for online learning. *Journal of educators online*. 2(2) 1-18.
 - Starcic, Andrejalstenic. (2012). Competence Management System Design in International Multicultural Environment: Registration, Transfer, Recognition and Transparency. *British Journal of education technology*. 48(4). 108-112. (from Abstract)
 - Subramanian, Ramesh. (2005a). Soft-skills Training and Cultural Sensitization of Indian Subramanian, Ramesh. (2005b). Soft-skills Training and Cultural Sensitization of Indian Training and Developing Employees. (n.d.). *Journal of Applied Human Resource Management*. Retrieved on 28th September 2012 (4:18). From http://www.sagepub.com/upm-data/26858_7.pdf.
 - Tyler, Keith—Smith. (2005). The Workplace e-Learner: Designing and delivering e-Learning into the workplace. Retrieved on 22nd July 2012 (6:35).
 - Vaughan, Kirsty ., MacVicar, Anna. (2004). Employee's pre implementation attitudes and perceptions to e-Learning: A banking case study analysis. *Journal of European Industrial Training*. 28(5). 400-413.
 - Vongchavalitkul, Busaya., Singh Parbudyal., Neal, Judi A., Morris, Michael. (2005). An Exploratory Study on the Effects of Learning Organization Characteristics on Internet Usage. *Journal of Group and Organization Management*. 30.398-420.
 - Wagner Ellen D. (n.d.). Competency-Based Learning: A cognitive strategy for effective e-Learning. Learning without limits.3.9 -19.
 - Waight, Consuelo L., Stewart, L. Barbara. (2005). Ivaluing the adult Learner in e-Learning: parta of a conceptual Model for corporate setting. *Journal of work place learning*. 17(5/6). 337-345.
 - Waight, Consuelo L., Stewart, L. Barbara. (2005). I valuing the adult Lear in e-Learning: part II Insights from four companies. *Journal of work place learning*. 17(5/6). 398-414.
 - Wang, M., Ran, W., Liao, J., & Yang, S. J. H. (2010). A Performance-Oriented Approach to e-Learning in the Workplace. *Educational Technology & Society*, 13 (4), 167–179.
 - Wan-Tzu, Wong., Neng-Tang Huang. (2011). The effect of e-Learning Technology using acceptance and e-Learning System Service Quality on organizational Learning Based on user perceptions. *International Journal of Businessand information*. 6(2). 205-225.
 - Welsh, Elizabeth T., Wanberg, Connie R. Brown, Kenneth G. Simmering, Marcia J. (2003).
 - William R. Hersh, Bhupatiraju, Ravi Teja. Greene. Peter S, Valerie Smothers, Cohen, Cheryl. (2006). Adopting e-Learning Standards in Health Care: Competency-based Learning in the Medical Informatics Domain. *AMIAAnnuSymp Proc*.334-336.
 - Xini, Giota., Petropoulos, Kostas. (2004.). Desingning Comepteny based e-Learning Initiatives. *Electronic Journal of e-Learning*. 2(1).227 -236.
 - Young, Tae Han., Williams J Kevin. (2008). Multilevel Investigation of Adaptive Performance.

Web links used

The websites have been referred for and have influenced the line of thinking:

www.worldinternetcenter.com/Publications/eLearning.pdf

<http://www.learningtechnologies.co.uk/magazine/article.full.cf m?articleid=6&issued=7§ion=1>

<http://derekstockley.com.au/elearning-definition.html>

<http://www.learningcircuits.org/glossary.html>

www.enpc.fr/enseignements/Legait/projet/MQTM-2003/G8/definition.htm

www.nga.org/center/divisions/1,118c_ISSUE_BRIEF^D_2128,00.html
<http://www.cipd.co.uk/NR/rdonlyres/6CA182B5-EEC8-4F39-AF16-6B24601C9DF4/0/incllearn4all.pdf>
<http://www.newmindsets.com/resources/2ndGenELearning.pdf>
http://www.ous.edu/sites/default/files/dept/hr/files/defining_comp.pdf
<http://nces.ed.gov/pubs2002/2002159.pdf>
<http://www.unep.org/vacancies/PDF/competencies.pdf>
http://www.careeronestop.org/competencymodel/info_documents/OPDRLiteratureReview.pdf
 From http://www.sagepub.com/upm-data/26858_7.pdf
<http://www.infed.org/thinkers/et-knowl.htm>
<http://www.simplypsychology.org/carl-rogers.html>
<http://www.infed.org/thinkers/et-knowl.htm>
<http://www.qotfc.edu.au/resource/index.html?page=65376>
<http://www.businessballs.com/kirkpatricklearningevaluationmodel.htm>
<http://www.businessballs.com/kolblearningstyles.htm>
<http://www.utsweb.net/Instructional%20Design%20Resources/GagneStyle.pdf>
<http://www.businessballs.com/vaklearningstylestest.htm>
<http://www.adityabirla.com/careers/elearning.asp>
http://www.cisco.com/web/learning/le31/le46/learning_customer_e-learning_connection_tool_launch.html
<http://www304.ibm.com/jct03001c/services/learning/ites.wss/in/en?pageType=page&c=a0000940>
<http://h30440.www3.hp.com/learningcenter/>
<http://elearning.tvn.tcs.co.in/>
http://www.capgemini.com/about/our_people/learning_development/overview/
<http://knowledgeacademy.kpmg.it/ilearn/en/learner/jsp/login.jsp?site=clienti>
<http://www.nestlenutrition-institute.org/resources/e-learning/Pages/Default.aspx>
<http://www.accenture.com/Microsites/india-graduates-site/Pages/training-development.aspx>
http://isites.harvard.edu/fs/docs/icb.topic608877.files/Class%20Three%20Reading/CLC_The_Use_of_Compencies_in_Performance_Management_Programs.pdf
<http://www.leadershipcoach.us/competency.html>
<http://www.qou.edu/arabic/researchProgram/eLearningResearchs/assessingOrganizational.pdf>
http://www.tanz.ac.nz/pdf/the_workplace_learner_wace.pdf
<http://www.findlearning.com/learn/ls.nsf/rlookup/sixsteps?open>
http://www.epic.co.ck/wp_organisational_benefits_2010.pdf
http://www.ddiworld.com/DDIWorld/media/trend-research/state-of-e-learning_es_ddi.pdf?ext=.pdf
<http://www.iglean.co.uk/blog/docs/LearningStylesELearningEnvironments.pdf>
<http://ssrn.com/abstract=1593808>
http://www.academia.edu/1353646/The_7_E-Learning_Barriers_facing_Employees_-_Penina_Mungania_2003