E-learning in Indian Power Sector: A Study of KEC International Limited

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Abstract

KEC International Ltd. is a global organization engaged in Infrastructure, Procurement and Construction. Their key areas of operation is into Power Transmission, Power systems, Cables with Railways, Telecom and Water to manage and operate their highly diversified enterprise. The company employs more than 5000 people worldwide, therefore, training and retraining these employees scattered in a very wide and different terrain is a demanding task. Presence of the company across the countries and location is a big challenge for the company.

At KEC employees are rated as the most valuable asset and reserve to meet the challenges posed by the operations of the company in a highly charged and fiercely competitive industry.

The company has adopted E-learning in a big way to keep the competition at a bay through well-educated and trained workforce and E-learning has been chosen as a best bet because the people working in power sectorare facing a problem of continuous up-gradation of knowledge.

Since the functions in power market are very complex, Energy Management System is mostly used as optimization tool and new features are added to this system, hence, a good and continuous retraining through E-learning is being practiced in the company.

In the power sector all over the world E-learning isthe utmost trusted and practical tool. However in India E-learning is yet to travel long miles.

While doing the study in an Indian power industry it has been observed that the training and education aspects have assumed a very significant and crucial role in the power market perspective.

While the study was being made, both technical and non-technical aspect of the employee have been approached and the study has analyzed several areas of E-learning and a contemporize position of corporate E-learning at KEC India Ltd. in particular has been observed. The study reviews the tropical challenges faced by the case company and tries to present the future of E-learning in the power industry domain.

Keywords: power market, power industry, energy management process, corporate eLearning

Introduction

The advancement of technology along-with social transformation all over business and industry training has gained great importance. Power sector has made training a regular feature right from induction, during the job process and also to increase competencies of their staff. The induction level training is important as the bridge the gap between academics and application of knowledge regarding equipment and processes.Trained manpower is required at practically all the aspects of the industry such as; planning, designing, material handling and storage, production process, maintenance of equipment, distribution management etc. Skill development or skilled manpower is the requirement of the day due to global competition, sophistication and advanced technological development. The regular updating of skill overcomes technological advancement woes by grasping and implementing latest process technology with confidence and perfection. To survive and excel in this competitive world, organizations have to focus on learning to enhance knowledge, skills and attitudes of the staff in all the processes.

Power sector organizations rely heavily on instructor-led training (ILT).Computers and video / audio tapes are used to supplement the various modes of traditional learning. The popularity of E-learning is gaining day by day in India but the adoption of this practice in learning and development is still at a very basic stage as compared to conventional methods of training and also in comparison to other countries such as US and UK.ICT based learning with talent development has already made inroads in the Indian Industry scenario. Power sector has also made significant progress. Audio-visual resources and on the job training has a major contribution towards external conferences, events, workshops and classroom based trainings in India. E-learning has provided tons of organized information at one's ease and convenience as against long-drawn out classroom sessions.

E-learning has proved to be an asset for most of the functional employees in power sector employees as they face challenges of continuous learning process.

Since the tool for optimization is Energy Management Systems (EMSs) is followed by several on-line application functions, such as, RPG Virtual Gurukul and 360 transform encompasses and is versatile with hardware and software tools to handle the organizational and information structures of an organization and upgrade employees' knowledge on the functional area. The complexities of the power market and with regular additions of new features require the users to use specialized systems ensuring the best performance with minimum risk. With higher value trade volumes, continuous trainings and refresher kits learning play an important role. The added value of E-learning has been experienced by the companies thus making its employees to undertake continuous learning without incurring heavy travel cost and time from work.

The importance of the role of training in power business is highlighted because of the following reasons:

a)   The very high financial business rise

b) The very intense competition

c) Continuous value addition through quality training refresher updates and professionally developed courses to the entire team equips the organization towards competitive gains.

d) The evaluation process under E-learning is instant through virtual sharing under real-time business activities.

Since the business uses the Energy Management Systems form a platform to connect various trade partners in optimizing calculations and communications and the power systems 360 transform creates and defines requirements for the kind of training required. Various software applications are used to assess, evaluate, create and define the training content.

The study evaluates E-learning position in KEC- the power giant. In this paper an analysis has been made by comparing the perceived quality, effectiveness and efficiency of E-learning and the conventional training.

Scope and limitations of the study

The study is aimed to find review evaluate the role of E-learning as a major toolespecially under EMS for its trade actions in power production and procurement companies. The company implemented E-learning courses into its refresher and training program and subsequently experienced radicaleffect in reducingthe training costs accompanied by enhanced performance resulting from employees' practice.The study aimedto find out success of training and development courses on the employees at KEC Ltd.

The study has certain limitations:

• Scarcity of resources and time

• This research was intended to use the questionnaire to gather important data from the respondents instead of personal interactions.

• There are also different indicators of employee's performance which are not centered in this study because of time constraint.

Literature Review

No previous studies have been found on E-learning in the Indian power industries. However, a study in the Nordic power market known as Nord Pool titled "Corporate E-learning Position in Finnish Energy Business - Power Market Perspective" (Juha P. Lahti and TamineeShinasharke) has been found.Articles and research papers were collected from university and general research databases available online, with the keywords for exploration as "E-learning success in India", "E-learning effectiveness models" and "Corporate e-learning".

However, the rational and technical characteristics can be obtained through general E-learning literature.

E-learning-Corporate views

According to Urdan and Weggen (2000), "E-learningis a wide set of applications and processes, including computer-based learning, web-based learning, virtual classrooms, and digital collaboration." E-learning can be considered including transferring and distributing content via all electronic media e.g.: Internet, intranets, audio/video tape, interactive TV, and CD-ROM, Pen drives etc. Majority of information and content for all the technology delivered training is currently available on LMS and CDs, followed by online training via organization's intranet.

E-learning has been observed to be highly popular in all areas of corporate being an effective training process is fast replacing the conventional methods considering its economic benefits apart for its sophisticated learner centric synchronous learning environment.

Globalization has given manifold challenges to organization through cut-throat competition, thus compelling organizations to explore new techniques and methods to bridge the gap between skilled and unskilled labor. The ever increasing research and development has increased the complexity and speed of work in organizations thus creating a bigger gap in performing skills.

Corporate E-learning process has given a boost and has promised tremendous growth to the education industry.

The economic value assessment of ICT based Education industry is approximately 15 billion Dollars. Thus the outcome shows the importance of this study in contrast with the contemporary position of E-learning and noteworthy scale in the latitude of this study.

Below mentioned topics are reviewed and evaluated as a result of study analyze and synthesis:

- E-learning status in KEC Ltd
- E-learning readiness
- Risk evaluation of E-learning in comparison to conventional learning methods
- E-learning systemused in KEC Ltd.
- Suggested Strategies

E-Learning status in KEC Ltd

This study was initiated through the feedback of a survey conducted with reference to the conventional training/learning methods vis-à-vis E-Learning.

The results of the study indicates that the company uses only 7 per centof E-learning module in the total trainings. Figure 1 presents average estimations as to what percentage of training done under E-learning module as against the totaltraining performed in the company in its various divisions.

The study predicted E-learning does not currently enjoy the position of a highlighted strategic area in the Indian Energy companies of India. The variation in various participants self-estimation in various divisions varied just about 10% and since the data being very small min/max findings are small.
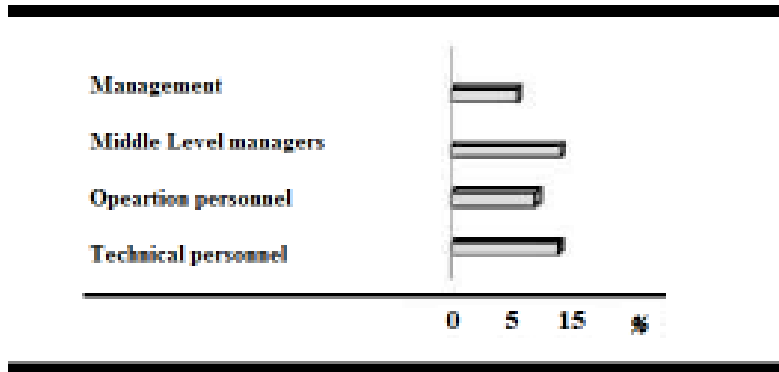
Figure 1 represents Participants' estimated percentages E-learning as against total learning

The budget estimates towards E-learning as per the self-estimation justifies the above observation.

ELearning readiness

As a part of the research, study conducted to find out the acceptance level of individuals in the specified field. It showed slightly more positive acceptance levels than the average. Amongst the complex constructs developed by many scholars to measure E-learning acceptance in the organizations, user satisfaction is the most commonly used parameter in evaluating the effectiveness of E-learning. According to D&M IS model the direct antecedent of E-learning impact on individual performance is based on System quality, information quality and system use.

Evaluating risks ofE-learning compared to conventional learning

Majority, of all the interviewed strategic decision makers' feel that the conventional learning process is less risky to the core business as compared to E-Learning. The reason is judged to be the quality of content and delivery.Due to quality reasons E-learning is not considered as a trusted alternative, as under risk managing policies companies prefer human checkpoints at various stages of operations. Earlier on, the traditional classroom training was considered to be the lion's share of corporate training. Eventually, learning has moved towards technology-driven content delivery.Costing, flexibility, convenience, quality and accessibility. The key factors of E-learning, contributes to the extensive deployment of the modern day delivery medium among companies worldwide.

Methodology

Under Random Sampling method Primary data was collected through questionnaire from the employees. Secondary data was collected from company's in house magazines, handouts, website and annual reports

Sample Size

The sample size used for the study was 100 respondents, out of it 68 were Male respondents and 32 were Female respondents of KEC, Mumbai.

The aim of this study is to determine assess and review the present area and the approach from both qualitative and quantitative viewpoint. Observational parts of the business side are highlighted.

This study was done in the business environment of some particular power markets in India and neighboring countries. The research was conducted by interviewing the organizations top management personnel, operative personnel and the experts behind the technical solutions and the trainers.

During the study, company's existing E-learning platforms and material were also reviewed. This was done with the point of gaining up a superior picture of background knowledge of the specialized E-learning tools used in the field of study.

Results have been frames through analysis and synthesis the management and personnel responsible for training and the technical experts working on the E-learning platforms. Results have been assigned to differentmodules for the better understanding of company's personnel perspectives.

Research Focus and Analysis

The study focused to evaluate and interview the company's CEO, CTO and middle level personnel of KEC ltd.

All personnel of the management, technical personnel, middle managers and operational personnel were contacted and it was found that the operative personnel were more inclined to E-learning than the middle level management personnel.

Outcomes

The evaluation and review conducted as a result of the study synthesis and analysis considering the following aspects.

a.   E-learning position in the case company

b.   E-learning acceptance

c.   Evaluating risks of E-learning as compared to traditional learning

d.   E-learning platform in case company

a.   E-learning position in the case company

The study shows a good start and interest by the company towards E-learning but data shows that the E-learning has been chosen as a highlighted strategic area to meet the challenges of the competition. It has been observed that the young employees are more enthused and interested in E-learning than the middle aged personnel.

The table 1 shows the Gender ratio amongst the total no of respondents. Thus the ratio being 68 per cent and 32 per cent between Males and females.

Table 1. Respondents in Terms of Gender

Gender	No. of Respondents	%
Male	68	68
Female	32	32
Total	100	100

Source: Primary data

b.   E-learning acceptance

The study has tried to establish as to how well the E-learning has been accepted in the specified field. The research shows participants perception towards acceptance level of E-learning.

Table 2. Respondents Attended the Training

Particular	No. of Respondents	%
Yes	100	100
No	0	0
Total	100	100

Source: Primary data

The below table 3 shows that 74 per cent of the total respondents were very clear of the purpose of training and the remaining were not clear.

Table 3: Clarity about Training Objectives

Particular	No. of Respondents	%
Yes	74	74
No	26	26
Total	100	100

Source: Primary data

c.   Evaluating risks of E-learning as compared to traditional learning

All the strategic decision makers feel that the traditional learning has lesser risk to the core business than E-learning due to quality reasons. As most of them

believe that E-learning may not dependable for big financial transactions. There are more chances of human errors.

According to the interviewed groups, E-learning has increased the likelihood of risks as compared to traditional training. However, the manpower group feels that E-learning has augmentedthe core business risk for various reasons.
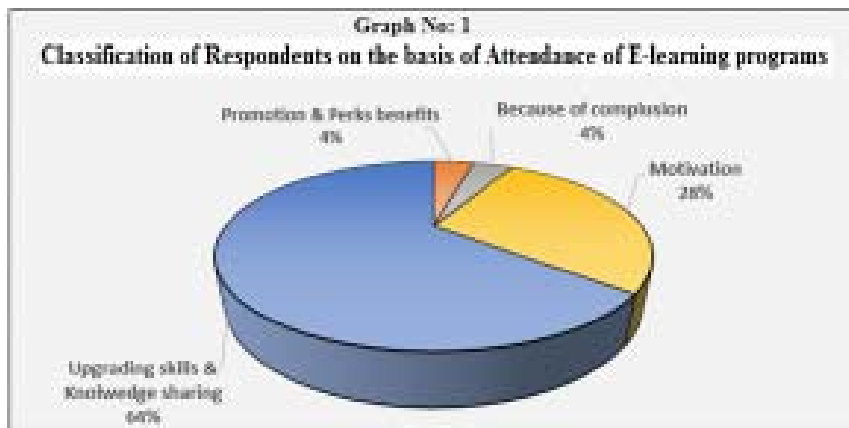
Important reason is a seen E-learning limits itself to:

- Quality of interaction
- Scope of Natural discussions
- Limitations in two-way Communication (e.g. by limiting nonverbal communication)

d.   E-learning system used in case company

In the case company the E-learning platform is an integration of commercial collaboration and intranet solutions. It supports synchronous as well as asynchronous interactions. The forums in the company's LMS help users to construct threaded discussions. These forums are helpful in answering general questions of the entire class, allowing users to come together or discuss on a certain topic or on crucial issues.

Suggested Strategies

All the participants in the study understand the rising role of E-learning in the coming 5 years. The descending order ranking of the various groups were the Technical staff, followed by the managerial staff and lastly the operational group. On an average people in younger age group, i.e. under the age of 40 years had higher expectations from E-learning. It was observed that most of the decision makers did recognize the importance of E-learning.

Graph No: 1
Classification of Respondents on the basis of Attendance of E-learning programs

Promotion & Perks benefits 4%
Because of compulsion 4%
Motivation 28%
Upgrading skills & Knolwedge sharing 64%

Graph No. 1 indicates that the majority of the staff sees positive growth in their skill set and knowledge.

Conclusion

Based on the interviews conducted and data collected and studied, it appears that E-learning is establishing itself and has been welcomed as a real option and the attitudes are in support of E-learning, though it is progressing at a very slow pace. The main reason is that under the E-learning module the digital delivery has a poorer state due to slow pace of implementation. Nearly all the employees are satisfied with the modern day training methods that are followed by the company.

Adoption of E-learning in KEC Ltd. mainly concentrated on areas like quality aspects, job oriented refresher trainings, technical skills and knowledge which is a big step towards achieving more efficient, flexible and effective employee training for the company.

Most of the respondents had a positive response towards overall quality and its effectiveness along with the development programs and were also satisfied with the present training methods.However, some of the interviewed employees feel that traditional classrooms provides them a social factors likeinteraction betweencolleagues, inter-departmental communication, subject oriented discussions etc.

The e-learning programs offered by the company have positive influence on employee's job leading to efficiency, minimal errors and high levels of job involvement. It creates positive results and contributes to favorable work conditions in the organization. Nearly all the employees have been a part of E-learning programs to enhance their expertise and knowledge levels.

Future Research

Due to staff's positive response towards the social factor under conventional training methods, the management see risk in implementing E-learning.More efforts and innovation is required to develop E-learning platforms.Beforesurveying the implications of an E-learning program for corporate employees it is recommended to investigate how management decides the learning needs of the employees.While few individualswrangle the obvious advantages of E-learning, methodical research is expected to confirm that learners are really acquiring and utilizing the expertise that are being instructed online, and that E-learning is the most ideal approach to accomplish the outcomes in a professional workplace.

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