



E-Learning: Analysis in Technical Institution

*Dharmendra Chourishi**, *Chanchal Kumar Buttan*** and *Abhishek Chaurasia****

**M.B.A. Department, T.I.T. College, Bhopal, (MP)*

***Commerce and Management Studies, Safia G. College, Bhopal, (MP)*

****Life Cell International, Chennai, (TN)*

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ABSTRACT : The E-Learning is learning through electronic means with the Internet as the renowned choice. The success of E-Learning depends on the following factors: learning effectiveness, cost effectiveness and institutional commitment, access, faculty satisfaction, and student satisfaction. As accessing has become more widely permitted through the open courseware and the like with reduced E-Learning cost as a result, more E-Learning employment should yield higher achievements in learning effectiveness, and faculty and student satisfaction toward E-Learning. Among four components of E-Learning included contents, LMS (Learning Management Systems), communication, and evaluation; the quality of learning material or online E-Learning content gets more challenging as it is the main criteria in teachers' up-to-date skills and students' learning quality. In this paper we present the results of our survey conducted on various aspects of the analysis of the E-Learning system.

Keywords: E-learning; analysis; Knowledge Management; Student satisfaction.

I. INTRODUCTION

Basic teaching and learning process which was based on active involvement of both teacher and student was the base of the success the whole process. Those teaching strategy, which is dependent on time and place, may be not enough for the present society, but may not be able to accommodate and produce the levels of education needed by future society. Although in certain areas traditional teaching methods still work best, it cannot be denied that education technology can expand the teaching and learning experience in ways only limited by one's own creativity. Educational technology can help to gain and hold attention, makes points clearer, makes students more on self- study, stimulate discussion and in general, enhance the learning process, if it also includes the appropriate human elements.

In the present era of 'fast food' concept, computer and internet involvement changed the scene of classes. Students expect everything ready and teacher also wants to make his class well defined and designed in advance. It needed to give a new look for virtual class i.e. E-learning.

A. What is E-learning ?

E-learning is the delivery of teaching material electronically with the added value of maintaining standards and quality without the limitation of a specific location. It involves the use of multimedia and is interactive. Multimedia includes more than one form of media such as text graphics, animation, audio and video conferencing. Interactivity (interactive learning) is a term that means a computer is used in the delivery of learning material in the context of education and training. In an interactive learning environment, a person can navigate through it, select relevant information, respond to questions using input

devices such as a keyboard, mouse, touch screen, or voice command system, complete tasks, communicate with others, and receive assessment feedback.

B. E-learning and Knowledge Management

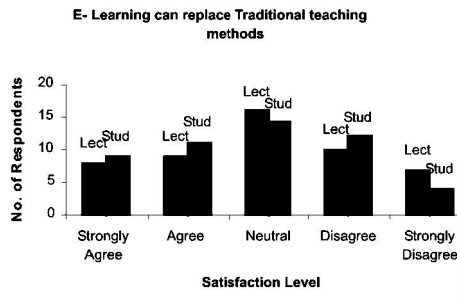
E-learning is related to Knowledge Management (KM). KM refers to the way in which an organization consciously and comprehensively gathers, organizes, shares, and analyses its knowledge in terms of resources, documents, and people skills. Advances in E-learning and other technologies have greatly improved the way most organizations access and share information, and many enterprises now have some kind of KM framework in place, whether they have formalized it and recognize it as such or not.

There are two types of knowledge in an organization: tangible and tacit. Tangible knowledge is that which is represented physically in some form, such as a manual or a spreadsheet. Tacit knowledge resides within the people in the organization: it is their knowledge, skills and experience. Most knowledge in an organization is tacit, but most e-learning solutions are designed to manage and deliver tangible knowledge. Now e-learning and KM are converging, and e-learning systems are becoming capable of also delivering tacit knowledge, through collaboration and other techniques.

C. E-learning and traditional learning

It is not expected that e-learning will replace traditional forms. there will not be a division between e-learning and traditional learning, as learning will naturally evolve to utilize technological progress to improve learning efficiency. Most academic institutions and organizations are incorporating blended learning and not just E-learning. This is the use of

more than one strategy or delivery system for learning. As learners, we naturally learn through a variety of methods; we talk to colleagues outside of the classroom, read a book, discuss with peers, take an online class etc. E-learning has the power to enormously enrich the learning experience through the use of interactivity and multiple media, both of which are shown by education theory to greatly enhance learning effectiveness.



In our study we conducted a survey to know the student's and teacher's opinion about the E-Learning. We prepared questionnaires to know what they think about interaction, level of course material, examination procedure, learning standard and teacher's role in their success. In our survey we found that the maximum percentage of students and teachers were neutral about E-Learning and Traditional way of teaching. It means they wish to have the advantages of Traditional side and E-Learning process.

II. EVALUATING THE EFFECTIVENESS OF E-LEARNING

There are many good reasons for evaluating the success of the online learning process. Some of them are given below :

- To validate training as a business tool Training is one of many actions that an organization can take to improve its performance and profitability. Only if training is properly evaluated can it be compared against these other methods and can you expect it, therefore, to be selected either in preference to or in combination with other methods.
- **To justify the costs incurred in training.** We all know that when money is tight, training budgets are amongst the first to be sacrificed. Only by thorough, quantitative analysis can training departments make the case necessary to resist these cuts.
- **To help improve the design of training.** Training programmes should be continuously improved to provide better value and increased benefits for an organization. Without formal evaluation, the basis for changes can only be subjective.
- **To help in selecting training methods.** These days there are many alternative approaches available to

training departments, including a variety of classroom, on-job and self-study methods. Using comparative evaluation techniques, organizations can make rational decisions about the methods to employ.

There is a widely accepted method of measuring the effectiveness of training programs. This method was developed by Donald L Kirkpatrick in 1959. Kirkpatrick's model comprised four levels of evaluation. To these four levels leading e-learning and HR consultant Jack Phillips has added a fifth level 13.

A. Level 1: Reaction

This level measures the learners' satisfaction with the program. How did they respond ? Were they pleased ? Did they find it worthwhile? Was it relevant and interesting? What did they do with what they learnt ? A positive reaction is an important starting point in any learning process. While it might not guarantee success, a negative reaction will guarantee failure.

B. Level 2: Learning

This level measures the program's effect on the learners' skills and perceptions. What skills have changed? Have attitudes and perceptions been altered? Are the learners more knowledgeable? To properly evaluate the effectiveness of the program at this level, it is usually necessary to test learners before and after the program.

C. Level 3: Behaviour

This level measures how the learners' behavior has changed as a result of the program. What new work practices have they adopted ? Have these work practices made a difference to how they do their job? Are they improving? To many people, this is the most important level in assessing the program's effectiveness, but it is also one of the most difficult to measure.

D. Level 4: Results

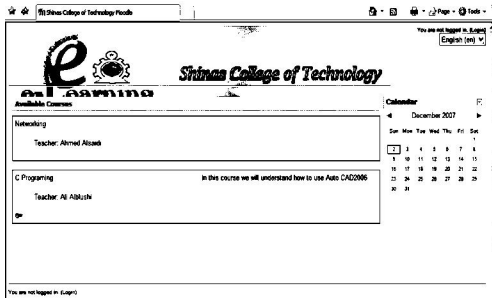
This level measures the business impact of the program. What effect did it have on the organization ? Is the organization better off ? Did the program result in a measurable improvement in organizational processes? Organizations train their staff so they can perform their jobs better, with an aim to boosting performance, productivity and ultimately profitability. There are many ways of measuring this, but it is important to identify factors that were affected by the program from those that were not. Jack Phillips recommends a distinction between hard data - traditional measures like units assembled, tasks completed, etc. - and soft data, such as absenteeism, job satisfaction, and loyalty. He also introduced the concept of comparing these benefits to the costs of the training program, which led to his introducing a fifth level to the four-level Kirkpatrick model.

E. Level 5 ROI

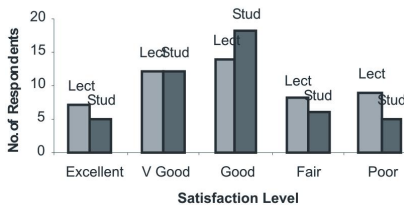
Return on investment (ROI) is a measure of the monetary benefits obtained by an organisation over a specified time period in return for a given investment in a training programme. Looking at it another way, ROI is the extent to which the benefits (outputs) of training exceed the costs (inputs).

ROI is calculated as follows :

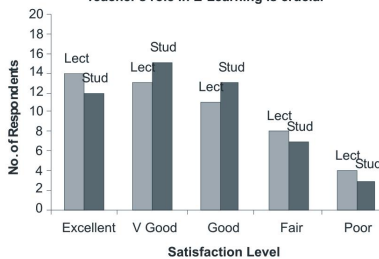
$$\% \text{ ROI} = \frac{\text{Benefits} \times 100}{\text{Costs}}$$



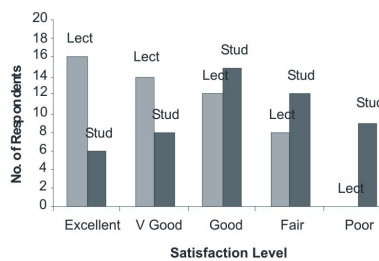
Interaction Level between the student and Teacher



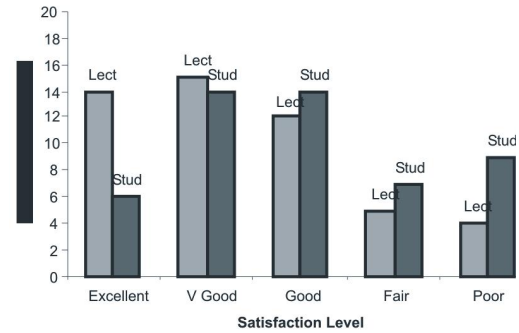
Teacher's role in E-Learning is crucial



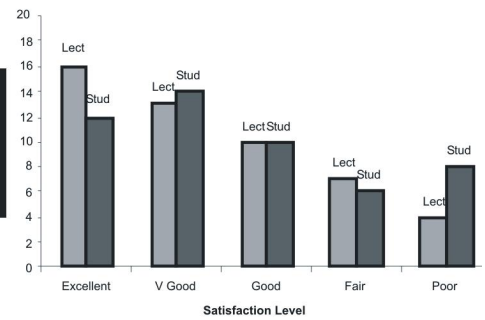
Level of Course material



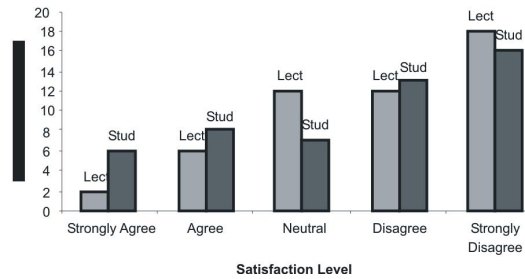
Level of Examination procedure



Level of Learning Standard Level



E- Learning can replace Teacher by PC



In our survey we found the direct E-Learning has become crucial for present generation with their IT skills and easy learning process. Interaction level of students vs. teacher is affected by virtual classroom environment. Teacher's role is always crucial for learning process. This is widely accepted by both. Regarding course material satisfaction level, it favors E-Learning concept. It shows that the quality and range of study material is increased which is favorable for the convenience and advantage of teachers as well as students.

About examination procedure teachers were looking more satisfied and highly graded for this concept but students were in back seat because of technical problems which they face in examinations and the time constraints. Instead of learning standard graph shows that both rated E-Learning high because it is helping both for achieving targets. Its sounds really good that still both student and teacher still respect and want to keep teachers position

safe. Even in most ambitious and advance of IT almost no one wants to replace PC to teacher.

III. CONCLUSION

This paper has indicated the crucial need to ensure that students are ready to learn through e-learning. Educators are the key component to insure that e-learning media integration embellishes the teaching process. This research work has shown the perception on students as well as educators on learning method. Indeed, when making a decision to invest in E-Learning it is likely an organization or academic institution will opt for a blended learning approach. The most effective tool for making an investment decision in E-Learning is to calculate the return on investment (ROI). But before calculating the return on investment in e-learning, the organization or academic institution has two important strategic choices to make, which affect the profile of cost and benefit. First, the organization or academic institution almost invariably mixes e-learning and traditional training; thus using what has come to be known as "blended learning". Though the main driver of blended learning has been concern about cost, both theory and available evidence suggest that blended learning will be more effective than e-learning alone. But the expected costs and benefits in its particular context to make a rational investment decision for E-learning are yet to be met. Furthermore, the needs assessment of e-learning is different to that of a traditional classroom program as it

involves a greater scope of parties. According to observation and the results of research, we conclude that the healthy mixture of traditional and latest method *i.e.* E-Learning will give a new direction for the effective learning and teaching methodology

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