CHAPTER-III

REVIEW OF LITERATURE

This chapter presents a brief overview of the past studies relating to the subject theme. In fact, this area has few studies directly relating to the main theme. Some researchers have made attempts to study e-learning from different perspectives. The studies which helped in conceptualizing the present research are given below in chronological and alphabetical order.

Bailey (2013). In her study Bailey has stated that, “the important thing is to focus on the needs of the learner. A good mixture of content and interactions will help learners retain knowledge gained from the lesson. And if you are unsure of where to start, you can draw inspiration from similar projects. For example, something like diversity training has been done by other instructional designers, so try to find what strategies they used that might also work for your module.”
**Preethi (2012).** According to Preethi, “The global online education space has been steadily growing over the past two years. Many may argue that e-learning is never a substitute for classroom learning. But interactive sessions and online classes ensure that you have contact with teachers. It has also enabled quality teachers from premier institutes to offer their knowledge to students from different parts of the country. Not to forget that high-speed internet connections have made this possible. It’s fast, efficient, time-saving, cost-effective and practical. Noticing this trend abroad, many Indian entrepreneurs have enabled quality e-learning in India."

**Obringer (2011).** She examined the psychology of learning, “Let's begin with what goes on in a person's head when they're learning. First, learning requires attention. Effective training grabs attention and holds it. Unfortunately, the neural systems in the brain that control attention and store information as memory get tired very quickly (in minutes). They need to rest every three to five minutes, or else they become much less responsive. They recover pretty quickly, but training has to work with this quick fatigue/boredom pattern for the person to learn efficiently. Besides catering to these neural systems' needs, training should also incorporate other elements such as interaction, imagery and feedback. E-learning can incorporate many elements that make learning new material, a new process or a new program more fun. Making learning more fun -- or interesting -- is what makes it more effective. Obviously, every type
of training can't be turned into e-training, but many can with excellent results.”

Obringer (2011). On the benefits of e-learning she further states that, “e-learning has definite benefits over traditional classroom training. While the most obvious are the flexibility and the cost savings from not having to travel or spend excess time away from work, there are also others that might not be so obvious. For example: It's **less expensive** to produce, It's **self-paced**, It moves **faster**, It provides a **consistent** message, It can work from **any location and any time**, It can be **updated easily** and quickly, It can lead to **increased retention** and a stronger grasp on the subject, It can be **easily managed** for large groups. There are many advantages to e-learning, and even the potential disadvantages (i.e. boring text-based courses, technophobia, loneliness) can be alleviated with a properly designed course”.

Luskin B (2010). He found that, “the “E” must be understood to have a broad meaning if e-learning is to be effective”. Luskin says that, “the “E” should be interpreted to mean exciting, energetic, enthusiastic, emotional, extended, excellent, and educational in addition to “electronic” that is a traditional national interpretation. This broader interpretation allows for 21st century applications and brings learning and media psychology into the equation”.

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**Bersin (2009).** According to Bersin who is also President and Founder, Bersin and Associates, “This is an exciting time of change in enterprise learning and talent management. The tight labor market, coupled with the increased focus on integrated performance and learning strategies, will force further alignment between training and HR. Learning technologies will evolve, and self-published content and collaboration will become a significant element in enterprise learning solutions”.

**Bersin (2009).** He further states that, “With the cost of implementing e-learning tools falling, more governments, businesses, and schools have added online courses and other forms of distance learning to their organizations. By keeping an eye on the top trends in e-learning, meeting some of the most influential experts in the e-learning field, and asking critical questions about your own strategy, you can make important decisions about how you use e-learning tools in your own life and at your own organization”.

Based on research from the Gartner Group, the University of Pennsylvania and other prestigious think tanks, **Bersin et al. (2009)** have identified vital trends that will influence the growth of e-learning. Excerpts - “By developing classrooms without walls, e-learning programs can reduce the costs of participation without negatively affecting the compensation for renowned lecturers, researchers, and presenters…… Governments deploy e-learning at
all levels. In addition to the obvious business uses for e-learning, governments around the world have discovered that e-learning programs can dramatically improve the quality of life for citizens while reducing the financial burden on taxpayers...... Governments in developing countries have invested heavily in e-learning programs to build eager, talented, work forces. Strong e-learning systems allow team members at collaborating companies to understand shared objectives. Workers can quickly learn about the inner workings of technologies and techniques...... With radio, satellite, and Wi-Fi signals beaming two-way information from distant locales, people can participate in an almost endless array of learning opportunities.”

**Fitter (2008).** On his finding about e-learning in the Indian Context, “Most people could not see what the fuss was about when e-learning was first introduced at the turn of the millennium. A few sang e-learning’s praises, but most thought it was quite a waste of time and money. But today, companies are finding it increasingly difficult to find well-trained, employable candidates, while recruitment levels are unprecedented. All this had led to dramatic increases in training expenses. Suddenly, the attractions of e-learning are far more obvious. Besides, broadband is here”.

**Fitter (2008).** Further, he states that, “According to studies by market analysts, IDC, the global e-learning market, which was
roughly $1.1 billion (Rs 4,400 crore) in 2000, will grow to more than $21 billion (Rs 84,000 crore) and corporate e-learning itself will grow 27 per cent year-on-year over the next four years. Nilesh Vani, executive vice-president of learning services at e-learning provider Aptech, believes that the content development market alone is worth $250 million (Rs 1,000 crore) in India, while the market for companies that only deliver e-learning, a newer service, is now worth nearly $5 million (Rs 20 crore). At any rate, growth has belied expectations so far. In 2005, Nasscom had estimated the e-learning market to be worth only around $9.5 million (Rs 38 crore).”

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<td>Auto Dealerships, especially new ones, that are spread across the Country can be instantly trained on Company policy.</td>
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<td>Retail Sector Employees spread across the retail chain’s network can be instantly trained to handle new marketing promotions etc.</td>
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<td>Language Training Trainees undergo specific skills improvement and skills refreshment training and can also take assessments online.</td>
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**Tynjala (2008).** He observed “Individual and group learning in the workplace requires high social activity like interaction, dialogue, reflecting on past experiences and future planning activities. Individuals can interact with e-learning, share goals, have access to more information. All employees can participate”.

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Johnson et al. (2008). In their study state that when an e-learning environment is established in an organization, “The learners can see not only the material, but also their own circles through the interaction and there is increased sharing of information. In addition, because there is an increased interaction of the individual, the learning environment is perceived to be more positive. Immediate interaction and feedback between instructors provides learners with the necessary information more quickly”.

Byer (2005). In her study she has observed that “E-learning provides organizations with a training method that can be conducted at the individual's convenience and can be accessed at any time where an Internet connection is available. Because of this level of availability, employees can work the training into their schedules as opposed to trying to coordinate a schedule where conflicts with work projects, time and travel are common. In addition, internet-based e-learning can often be standardized and updated immediately as information or technology changes - unlike printed books and manuals.”

Choudhury (2005). Based on a research he states that, “Successful e-learning necessitates a powerful strategy. And it is pertinent that all e-learning strategies be grounded in strong research. Just the way a teacher would adopt a different style of teaching in a classroom setting for different groups of students, e-learning too essentially
requires a good strategy that sets the platform for optimum learning.”

**Price et al. (2005).** In a review paper they show how academics internationally are increasingly expected to work in teams (especially when developing curricula), are positioned as part of a more industrialised process of teaching and are forced to re-think their teaching approaches. It would be over-simplistic to say that technology has ‘caused’ all this, but it is certainly implicated – the promotion of teaching approaches using new technology is often seen as a way to achieve these wider changes.

**Ravenscroft (2004).** He argues that probably the most engaging application of the theoretical stance within e-learning was delivered by Papert (1980) in his book *Mindstorms* and with the LOGO programming language that he developed. Although this work was aimed at understanding and developing intellectual development in children, arguably the work carries broader significance, in that it focuses on processes and mechanisms (such as experimentation, reflection and abstraction) that are also prevalent and important in ‘adult’ learning.

**Vaughan (2004).** According to him, e-learning uses electronic multimedia technologies to reach a wider audience and distribute
knowledge by using Internet, intranet, and other technology-based systems.

**Salmon (2003).** A specific e-learning model that describes the stages of increasing competence in participating in an online community is Salmon’s five-stage framework for supporting effective e-moderating in discussion forums, which emphasizes the dialogic aspects of socially situated theoretical perspectives. Her stages are: access and motivation; online socialization; information exchange; knowledge construction; development. This model has been incredibly popular and has been taken up and applied extensively.

**Welsh et al. (2003).** In their research state that “e-learning is very effective for prior knowledge capture, use and interaction between staff and the online material. Thus, while learning time enables continuity, flexibility and accessibility, learning materials are distributed free of charge and fast to a wider audience”.

**Govindasamy (2002).** He states that, “many institutions of Higher Education and Corporate Training Institutes are resorting to e-learning as a means of solving authentic learning and performance problems, while other institutions are hopping onto the bandwagon simply because they do not want to be left behind. Success is crucial because an unsuccessful effort to implement e-learning will be clearly reflected in terms of the return of investment. One of the
most crucial prerequisites for successful implementation of e-learning is the need for careful consideration of the underlying pedagogy, or how learning takes place online.”

**Gulati and Sivakumaran (2002)**. According to them, “Web based learning is the current frontier for distance education providers. It involves CBT using Internet technologies. The most predominant and elevating characteristic of web based learning is that it is interactive and not passive. It is also easy to distribute, evaluate and update.”

**Strother (2002)**. A researcher from Florida Institute of Technology found that “Corporate managers are constantly looking for more cost-effective ways to deliver training to their employees. E-learning is less expensive than traditional classroom instruction. In addition, many expenses – booking training facilities, travel costs for employees or trainers, plus employee time away from the job - are greatly reduced. However, some firms that have spent large amounts of money on new e-learning efforts have not received the desired economic advantages”. “In addition to generally positive economic benefits, other advantages such as convenience, standardized delivery, self-paced learning, and variety of available content, have made e-learning a high priority for many corporations. There is no doubt that corporations are increasing their emphasis on e-learning.”

**Bassi (2001)**. In her research demonstrates that investment in training adds to the value of a company's shares - a high priority for
corporations and she claims that there is added value regardless of overall market conditions.

**Beetham et al. (2001).** They carried out a detailed survey of learning technologists and found that this first generation of learning technologists shared a set of common characteristics. They tended to come from a wide range of professional backgrounds. They acted as change agents, adopting multi-faceted roles, and were often involved in the entire process of development, support and use.

**Driscoll (2001).** According to Driscoll, much of the discussion about implementing e-learning has focused on the technology, but e-learning is not just about the technology, but also many human factors.

**Driscoll (2001).** He further states that, “Assessments are the foundation of effective instructional practices and return-on-investment studies. The power of tests and assessments will become exponentially more important with the advent of content management systems and learning management systems.” Indeed, data from assessments should help drive the development of solid content and advanced instructional practices.

**Nelson (2001).** He observed a significant difference between the mean grades of 406 university students earned in traditional and distance education classes, where the distance learners outperformed
the traditional learners. Along these same lines, a California State University Northridge study reported that e-learners performed 20 percent better than traditional learners.

**Rosenberg (2001).** He identifies knowledge management as a key in creating a culture for e-learning. E-learning and knowledge management are separate processes from training. In speaking of knowledge management, he stresses that support to move in the learning-through-technology direction must be championed by management—especially front-line managers must be on board for success to be realized. Building intellectual capital and investing early on not only in the job performance of each employee, but also in the potential of that employee through learning opportunities is tantamount. An effective knowledge management system not only provides a vehicle to share information, but also builds a community of learners. The employee can use their computer to view company policies, access forms, distribute information among colleagues, share stories, access expertise of respected sages, trouble shoot, gain up-to-the-minute advice, teach, coach, and customize one’s training needs.

**Bregman and Jacobson (2000).** They noted that the additional desired outcome of positive business results is notoriously difficult to measure for the corporate training arena, because of the following factors:

- Conducting a rigorous evaluation can be expensive and time-consuming.
Isolating a direct cause-and-effect relationship between training programmes and a business' bottom line is difficult.

Determining the appropriate outcomes to measure is challenging.

**Dalton (2000).** He states that, “Forrester, an independent research firm that helps companies assess the effect of technology change on their operations, interviewed training managers at 40 Global 2500 companies and found that all but one of them already had online initiatives in place. A survey of 500 training directors clearly shows the new priorities”.

**Hall and LeCavalier (2000).** They summarized some firms' economic savings as a result of converting their traditional training delivery methods to e-learning. IBM saved US $200 million in 1999, providing five times the learning at one-third the cost of their previous methods. Using a blend of Web-based (80 percent) and classroom (20 percent) instruction, Ernst & Young reduced training costs by 35 percent while improving consistency and scalability. Rockwell Collins reduced training expenditures by 40 percent with only a 25 percent conversion rate to Web-based training. Many other success stories exist. However, it is also true that some firms that have spent large amounts of money on new e-learning efforts have not received the desired economic advantages.
**Serrano and Alford (2000)**. They conducted research that clearly showed that incorporating technology across the curriculum acts as a catalyst for all learners. They concluded that e-learning empowers students to engage actively in language-content learning tasks and to develop higher-order critical thinking, visualization, and literacy skills.

**Biggs (1999)**. He uses the phrase ‘constructive alignment’ and describes good pedagogical design as ensuring that there are no inconsistencies between curriculum, teaching methods, environment and assessment.

**Giddens (2000)**. He notes that “instantaneous electronic communication isn’t just a way in which news or information is conveyed more quickly. Its existence alters the very texture of our lives”.

**Mayes and Fowler (1999)**. They point out, “one problem in focusing on learning objects is that teachers tend to plan e-learning around ‘instructivist’ learning models, which focus on single learners accessing content. Thus, it does not help bridge the gap between current pedagogical theory and implementation”. 
Moore (1999). He noted: “One of the few generalizations that can be made about any distance education program – whatever the communications media used and the content level – is that a good monitoring and evaluation system is likely to lead to a successful program, and a poor system is almost certain to lead to failure.”

Moore describes the three key features of a good system as follows:

1. The preliminary specification of good learning objectives, with this crucial question at the heart: Did each student produce evidence of having learned what was required as specified in the learning objectives? If not, why not?
2. The construction and handling of assignments, which are the students’ evidence of learning and an important source of feedback for the program.
3. A good data gathering and reporting system and a solid review of all of the data by both instructors and program administrators.

Redding and Rotzien (1999). In a study within the insurance industry, they found that the online group is the most successful at cognitive learning as measured by the end of course examinations. The results of the study do provide strong support for the conclusion that online instruction for individuals entering the insurance field is highly effective, and can be more effective than traditional classroom delivered instruction.
Wegner et al. (1999). They provided an example of a study showing no significant differences between the test scores of experimental (e-learning) and traditional (classroom-based) students at Southwest Missouri State University. Although there were no statistically significant differences in test scores, this two-semester study yielded qualitative data that indicated that students in the e-learning group had, overall, more positive feelings about their experience than did the control group. This observation is consistent with those found in a number of the “no significant difference” studies.

Barron (1998). He observes that, “learning technology providers have been increasingly able to demonstrate cost-savings and broader benefits, develop integrated offerings, and propose innovative ways of applying e-learning.” However, how do training managers decide which educational products and which learning technology providers actually produce effective results? How do they balance product quality with training costs? As the new corporate adage goes: Wise training managers realize the bitterness of poor quality remains long after the sweetness of low price has been forgotten.” To justify making decisions about training programs independently of training cost considerations, managers need concrete measures of program effectiveness. While there is no doubt that we see an increasing number of case studies showing success with e-learning, it is still difficult to find solid research measures of learner achievement in the specialized setting of a corporate training program.
**Boud et al. (1993).** He argues that, “the job of the teacher is to create imaginative ideas that make the learning engaging and meet the needs of learners”, going on to state that “the teacher creates an event which the learner experiences and may learn from.” Clearly technologies offer new opportunities to enhance the learning experience, but usually these opportunities are not being realized.

**Kirkpatrick (1979).** He noted that the number of variables and complicating factors make it difficult, if not impossible, to evaluate the direct impact of training on a business' bottom line and this is just as true for e-learning as for traditional training programs.