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CHAPTER II

REVIEW OF RELATED LITERATURE

2.0.0 INTRODUCTION
The literature relevant for the study was obtained through several different methods. The following process was used to locate appropriate research material. The first search tool was the use of ERIC website on the internet. A search containing the text "e-learning" was submitted in the ERIC database and found 2286 hits. A review of around 60 articles helped to find relevant information for this research topic which could be divided into categories like online learning tools, online learning, e-learning readiness, e-learning challenges etc.

A second internet query was a search under the keyword strings like "e-learning", "e-learning initiatives", "e-learning challenges", "e-learning vs traditional system", "virtual initiatives in the institutions" etc on google.com. In all together under such headings the researcher could find around 12,000 hits. There were many hits that overlapped with the ERIC digest, msn.com etc. The researcher tried to review at least first 30 hits under each keyword string. The researcher also tried to review the studies from various other reference materials. Several websites were obtained from search engines like ask.com, yahoo.com, msn.com, google.com, wikipedia and many other blogs. Several books and articles on e-learning were reviewed from various libraries that were accessible to the researcher. Through all these steps the researcher could find many studies which were directly or indirectly relevant to the area of present study and gave the researcher a strong base to carry out the present study

2.1.0 STUDIES RELATED TO E-LEARNING READINESS, PRACTICES, STATUS AND ITS IMPLEMENTATION

Reddy et al. (2001) conducted a study on students experience with virtual campus. The objective of this survey study was to analyze the attitude of the learners towards resource-based learning and to critically examine the utilization of the resources provided by the university; and to suggest measures for improving the effectiveness of resource-based learning.
The questionnaire that was mainly structured with a few close-ended (objective type) and open-ended questions was sent to the students of various tele-centers. Out of 1266 learners, 443 (35%) have returned the filled in questionnaires. Around ¾ of the respondents replied positively. Majority (68%) of them felt that they could construct their own individual knowledge base; 60% of them liked the flexibility in study routes; 46% improved their study skills; 29% could think more; 28% found it interesting and stimulating; 42% enjoyed the independence, and 29% liked the choice of reading.

However, 25% of the respondents answered in the negative. They did not very much enjoy resource-based learning mentioning that they needed more guidance on what to do and how to do; they also expressed that pursuing courses through VC found tiresome and time consuming and feel drowning in a sea of information.

Jamlan (2004) has conducted a study on “Faculty Opinions towards Introducing e-Learning at the University of Bahrain”. To assess faculty opinions on e-learning, a questionnaire was sent to 30 faculty members of the University’s College of Education to determine how they perceive e-learning, and how they might choose to integrate it into their everyday teaching activities.

Data was collected and analyzed by using descriptive statistics. Results indicate that faculty generally perceive e-learning as a positive force in helping students’ achieve their learning objectives. Answers to this questionnaire indicated areas of weakness like specifically those baseline technological and human resource prerequisites that are necessary to support e-learning are not yet available at the University of Bahrain. Other baseline prerequisites were: staff training, well prepared online courses and learning materials, sufficient groundwork for the smooth transition from traditional modes of learning towards e-learning delivery, and the implementation of a more robust technological infrastructure to support all the technical aspects necessary to launch and sustain e-learning.

Hiroshi (2005) conducted a study titled "Questionnaire-based Evaluation of e-learning Program Operated in National Institute of Public Health" in Japan. For the sake of more development of the e-learning program in NIPH, monitoring by
questionnaires of all trainees was carried out in 2005. Number of subjects posted was 298 and the valid response rate was 72%.

The results were as follows: 1) A large number of trainees were key staff engaging in the works of public health, environmental hygiene and social welfare and they pointed the advantage of the e-learning program joinable at any time and at any place; 2) Sixty percent of trainees entered the e-learning site while off duty; 3) Most of trainees learned for the purpose of improving of their own skills and not as the result of orders from their superiors; 4) They had a sufficient internet technical environment for e-learning; 5) Seventy percent of trainees who had completed at least one course of this program were satisfied with this program; 6) Though the certificate from the courses were recognized only in few workplaces, trainees could utilize their experiences from this program in their work; 7) Fifty percent of trainees advised their co-workers to apply for this program.

Newhouse et.al (2006) undertook an exploratory project titled "supporting mobile education for pre-service teachers" to develop skills and experience in using digital technologies among teacher trainees to support their teaching in schools. An additional survey was given to students at the end of the semester to ascertain the effect of their experience with the technology. The students were required to rate statements from strongly disagree (1) to strongly agree (4).

The outcomes of the project were positive however, it was not clear whether mobile education is a preferred solution when considering the range of digital device options available. The results indicate that students felt the use of a laptop computer assisted them in their learning, by providing increased access to resources and helping them to be independent and better organized. The feeling that it enhanced communication with the lecturer or with other students was not strong.

Proctor & Burnett et.al (2006) carried out a study with the objective to study ICT integration and teachers' confidence in using ICT for teaching and learning in Queensland state schools. A tool based on the 4 point likert scale was used to carry out the study. Descriptive statistics like percentage was used to study the objectives of the study. Inferential statistics like Chi square tests, Multivariate analysis of variance (MANOVA), univariate analysis of variance (F-tests) were used to test the
relationship between gender and confidence level, unconfident and confident teachers etc.

Results from 929 teachers across all year levels and from 38 Queensland state schools indicated that female teachers (73% of the full time teachers in Queensland state schools in 2005) were significantly less confident than their male counterparts in using ICT with students for teaching and learning, and there is evidence of significant resistance to using ICT to align curriculum with new times and new technologies. The study reflected that urgent investigation in order to address the factors that currently constrain the use of ICT for teaching and learning need to be carried out.

**Smart & Cappel (2006)** carried out a study titled "Students’ Perceptions of Online Learning: A Comparative Study". This study examined students’ perceptions of integrating online components in two undergraduate business courses where students completed online learning modules prior to class discussion.

The results indicate that participants in an elective course rated the online modules significantly better than those in a required course. Overall, participants in the elective course rated the online modules marginally positive while those in the required course rated them marginally negative. On the basis of the outcomes they suggested that instructors should be selective in the way they integrate online units into traditional, classroom-delivered courses. This integration should be carefully planned based on learner characteristics, course content, and the learning context. For most participants of the study (83 percent), this was their first experience completing an online learning activity or module. In addition, the largest dissatisfaction factor reported among the participants was the time required to complete the online modules. Future research is encouraged to explore: (1) how previous experience with technology and online learning affects students’ attitudes towards and success with e-learning; and (2) the effects of interspersing online units that are considerably shorter in length into the traditional classroom model.

**Alaa (2007)** conducted a study to find out the readiness of faculty members of Egyptian University to develop and implement e-learning. In this study, a survey was developed, validated, and carried out to examine the readiness of academic staff at South Valley University in Egypt to develop and implement e-learning in their
teaching. The survey was also used to determine how support systems and procedures for staff could be further developed to enable the University to make the most effective and appropriate use of learning technologies to enhance the student and staff experience.

The results revealed that the majority of respondents, who came from a wide range of faculties across the University, considered themselves to have limited competence and little experience in e-learning. However, they perceived e-learning to be useful in general and to have the potential to support their teaching-related activities in particular.

**Buenafe et al. (2007)** undertook a project titled “The Provincial Business Education Project”. The key objective of the project was to determine if e-learning could address the challenges associated with reaching students outside of Phnom Penh. Under this project, two 'semesters' of online business courses were delivered to students in five provinces. Two hundred seventy two provincial Cambodian students took advantage of one or more of the five online courses developed under the project to improve their knowledge of key business topics and over 75 percent of these individuals scored sufficiently high on exams and assignments to receive accredited certification.

According to the researcher, the results strongly suggested that e-Learning can be a successful approach to providing quality higher education to underserved provincial students in Cambodia, and that this approach can open new opportunities for educational institutions to reach out to underserved women and men in Cambodia via online courses.

**Cheolil (2007)** conducted a study titled “The Current Status and Future Prospects of Corporate e-Learning in Korea”. This study argues that the main cause of this heightened interest in corporate e-Learning in Korea was not that companies needed to provide high-quality training programs through the Internet, but rather that the government took initiative to transform the state into an information-based society. The policies for quantitative growth with minimum levels of quality and uniformity have been dominant and have resulted in the lack of diverse e-Learning types for authentic practices in workplaces.
The study suggests that in order to cope with the new competency requirements of employees, corporate e-learning should be guided both by governmental support and by company initiative.

Hasan (2007) conducted a study “Critical Success Factors for e-Learning Acceptance: Confirmatory Factor Models”. This study specifies e-learning critical success factors (CSFs) as perceived by university students. The published e-learning critical success factors were surveyed and grouped into 4 categories namely, instructor, student, information technology, and university support. Each category included several measures. The categorization was tested by surveying 538 university students.

The results revealed 8 categories of e-learning CSFs, each included several critical e-learning acceptance and success measures. The level of criticality of each measure was represented by its validity coefficient. Confirmatory factor modeling approach was used to assess the criticality of the measures included in each CSF category.

Jennifer et al. (2007) conducted a study on “e-Learning: The Student Experience” The study attempted to draw an in-depth qualitative comments from students regarding an e-learning module on an M.Sc. in Information Technologies and Management, so as to develop a picture of their perspective on the experience. Questionnaires that yielded some basic quantitative data and a rich seam of qualitative data were administered. General questions on satisfaction and dissatisfaction identified the criteria that student used in evaluation, while specific questions of aspects of the module generated some insights into the student learning process. The criteria used by students when expressing satisfaction were: synergy between theory and practice; specific subject themes; discussion forums and other student interaction; and, other learning support. The themes that were associated with dissatisfaction included: robustness and usability of platform; access to resources such as, articles and books; currency of study materials; and, student work scheduling. Aspects of the student learning experience that should inform the development of e-learning included: each student engages differently; discussion threads and interaction are appreciated, but students were unsure in making contributions; and, expectations about the tutor's role in e-learning.
Leem et al. (2007) conducted a study titled “The Current Status of e-Learning and Strategies to Enhance Educational Competitiveness in Korean Higher Education”. The purpose of this study was to examine the current status of e-Learning in Korean higher education and to find ways to encourage the further use and development of e-Learning systems that aim to enhance Korea’s academic competitiveness. A total of 201 universities in Korea (27 national and public, 163 private, and 11 national universities of education) were examined in this study. The survey questionnaire was developed to study the objectives of the research and it was sent via email or mail, addressing to the officer or staff person in charge of e-Learning. Responses were collected via email, fax, or mail.

Findings from this study found that both teachers and learners alike, lacked meaningful support systems and opportunities to actively participate in e-Learning programs. Although such lack of support was found to be endemic, such lack of support and opportunity was found to be more acute in private universities, private colleges, universities of education, than mid-sized, small-sized, and provincial universities and colleges. Except for a few mid and small-sized universities and colleges, most large universities and colleges were equipped with technical support such as infrastructure and operational platforms. These same schools, however, did not provide institutional support, nor did they employ appropriate policies needed to further the quality and enhancement of e-Learning offerings. Also, there was no meaningful link found between schools and industry, nor was there adequate financial support in place for the implementation of e-Learning systems, simply because many universities failed to allocate sufficient funding for e-Learning. In conclusion, the strategies for enhancing university competitiveness through e-Learning were given as follows: 1) establishing support strategies according to the types of universities; 2) developing quality assurance systems for e-Learning; 3) enhancing support systems for professors and learners; 4) developing knowledge sharing systems between schools and industry; 5) enhancing international collaboration for e-Learning; and 6) developing and supporting e-communities of knowledge for research and education.

Nafukho & Muyia (2007) conducted a study “The Place of E-Learning in Africa’s Institutions of Higher Learning”. The study seeks to accomplish four objectives. The first is to examine the need for e-learning in Africa's institutions of higher learning.
The second is to discuss the policy, institutional, pedagogical, copyright, and quality assurance issues that need to be addressed. The third is to critically examine the advantages and disadvantages of e-learning in African universities. The fourth is to provide a practical partnership model for design and successful delivery of e-learning programmes. To achieve these objectives, a critical analysis of relevant literature and case studies was conducted. The literature search included computerized search of accessible and available material on e-learning in Africa and world over, manual search of existing literature, and communication with key subject matter experts to locate published and unpublished studies.

The results of the study showed that e-learning has a future in Africa's universities and that there is need to build e-learning programmes based on genuine partnerships from other successful partners within and outside Africa.

Yair (2007) conducted a study to compare the dropout rate and persistence in E-Learning courses. This study explores two main constructs: (1) academic locus of control; and, (2) students' satisfaction with e-learning.

Results show that students' satisfaction with e-learning was a key indicator in students' decision to dropout from e-learning courses. Moreover, dropout students (non-completers) reported to have significantly lower satisfaction with e-learning than students who successfully completed (completers or persistent students) the same e-learning courses. Additionally, results of this study showed that the academic locus of control appears to have no impact on students' decision to drop from e-learning courses.

Unwin (2008) conducted a study titled “survey of e-learning in Africa” and published a report summarizing the information about the status of e-learning in Africa, based on 316 responses to a questionnaire circulated in 2007 to people on the e-learning in Africa database. Respondents to the survey were from 42 different African countries, of those who responded to questions about e-learning and blended learning, 72% said they used e-learning (although this only represented 48% of all respondents) and 78% used blended learning approaches. The three main conclusions of the study are 1. there is a wide variety of different e-learning practices in Africa; 2. e-learning is still
very much in its infancy across most of the continent; and 3. there is much enthusiasm amongst respondents for developing the potential of e-learning in their countries.

However, respondents also identified key constraints in seeking to implement and develop e-learning strategies and practices, including the lack of infrastructure (particularly connectivity, and especially in rural areas), the need for appropriate training and capacity development, a lack of relevant digital content, and the cost of implementation. Majority of uses for e-learning were in the higher educational and vocational fields. 68% of respondents remarked that they thought that e-learning is, or could be, very valuable for their learning and teaching needs. The study also collected many suggestions from the respondents on how to make e-learning effective. Many respondents were unable to say which Learning Management Systems (LMS) they were using. Majority of those claiming to be using e-learning are not using an integrated formal learning management system at all, but are rather using basic digital technologies to enhance their learning.

With respect to specific e-learning practices and methods that they used in their teaching/learning, the dominant practices seemed to be the use of the Internet, e-mail, CDs, the Web, video, chat, and presentations, Discussion forums were only mentioned by 3% of respondents, the use of digital libraries, messenger, and only 1 respondent specifically mentioned educational games. The study gave a conclusion saying that there is still not a particularly high level of sophistication in the usage of e-learning among the majority of the respondents.

Al-Fadhli, Salah (2009) conducted a survey to study the instructors’ perceptions of E-Learning in an Arab Country. The purpose of this research was to study the pedagogical impact of e-learning on higher education, specifically the university-level educational institutions within an Arab university setting.

The study has come out with a finding that e-learning has an important role in the enhancement and development of students’ critical thinking. As a result, if academic institutions wish to develop e-learning initiatives, they must be receptive to implementing effective strategies to support such a beneficial and innovative initiative for the benefit of student learning.
Fetaji & Fetaji (2009) conducted a research titled "e-Learning Indicators". The main objective of this research was to develop possible approaches to systematic planning, development and evaluation of e-learning initiatives and their corresponding e-learning projects.

The study identified 18 factors as indicators of e-learning and used a questionnaire consisting of 23 questions related to these 18 factors. These factors were (1) learner educational background (2) computing skills level (3) type of learners, (4) their learning style and multiple intelligence (5) obstacles they face in e-learning (e-learning barriers) (6) attention (7) content (suitability, format preferences), (8) instructional design, (9) organizational specifics, (10) preferences of e-learning logistics (11) preferences of e-learning design (12) technical capabilities available to respondents (13) collaboration (14) accessibility available to respondents (15) motivation (16) attitudes and interest and (17) performance-self-efficacy (the learner sense their effectiveness in e-learning environment) (18) learning outcomes. For the purpose of the study, questionnaires, surveys, focus groups, usability testing and other software testing groups were used.

Kaur & Abas (2009) conducted a study on "An Assessment of e-Learning Readiness at the Open University Malaysia". It was a study to determine the e-readiness of Open University Malaysia receivers and enablers. Data were gathered from a sample of 93 receivers and 35 enablers with the use of the e-learning Readiness Research Tool. The 60-item questionnaire consisted of two parts: 16 items focused on gathering demographic data and 44 items on exploring eight constructs, namely, learner, management, personnel, content, technical, environmental, cultural and financial readiness.

It was found that there was a greater degree of technological readiness in comparison to academic or cultural volition. Second, receivers were more positive about their own level of readiness in comparison to enablers’ perception of learner readiness. Third, there appeared to be a preference for non-electronic channels of communication and modes of learning in comparison to learning through e-networks. Finally, many individuals were concerned about the status of qualifications attained through e-learning.
Kay, M & Seamus, F (2009) developed a paper titled "Strategies for Embedding e-Learning in Traditional Universities: Drivers and Barriers". In the paper they tried to address the question of "how can e-learning be embedded in traditional universities so that it contributes to the transformation of the university?". For the paper they tried to examine e-learning strategies in higher education, locating the institutional context within the broader framework of national and international policy drivers which link e-learning with the achievement of strategic goals such as widening access to lifelong learning, and upskilling for the knowledge and information society. The focus was on traditional universities i.e. universities whose main form of teaching is on-campus and face-to-face, rather than on open and distance teaching universities, which face different strategic issues in implementing e-learning.

In the paper they expressed the following views: 1. Realisation of the vision of ubiquitous and lifelong access to higher education requires a fully articulated e-learning strategy aims to have a "transformative" rather than just a "sustaining" effect on teaching functions carried out in traditional universities, 2. rather than just facilitating universities to improve their teaching, e-learning should transform how universities currently teach, 3. to achieve this transformation, universities will have to introduce strategies and policies which implement flexible academic frameworks, innovative pedagogical approaches, new forms of assessments, cross-institutional accreditation and credit transfer agreements, institutional collaboration in development and delivery, and, most crucially, commitment to equivalence of access for students on and off-campus. The insights in this paper are drawn from an action research case study involving both qualitative and quantitative approaches, utilising interviews, surveys and focus groups with stakeholders, in addition to comparative research on international best practice.

This study examined the drivers and barriers which increase or decrease motivation to engage in e-learning, and provided some insights into the challenges of embedding e-learning in higher education. While recognizing the desirability of reaching out to new students and engaging in innovative pedagogical approaches, many academic staff continues to prefer traditional lectures, and are skeptical about the potential for student learning in online settings. Extrinsic factors in terms of lack of time and support serve to decrease motivation and there are also fears of loss of academic
control to central administration. The paper concludes with some observations on how university e-learning strategies must address staff concerns through capacity building, awareness raising and the establishment of effective support structures for embedding e-learning.

Lee, Chai and Yen, Poh (2009) conducted a study titled “E-learning in Malaysia: Success Factors in Implementing E-learning Program”. The main objective of the study was to identify successful factors in implementing an e-learning program. With the help of the existing literature the researcher enlisted the successful factors in implementing an e-learning program. These factors include program content, web page accessibility, learners’ participation and involvement, web site security and support, institution commitment, interactive learning environment, instructor competency, and presentation and design. All these factors were tested together with other related criteria which are important for e-learning program implementation. The samples were collected based on quantitative methods, specifically, self-administrated questionnaires. All the criterions were tested to see if they were important in an e-learning program implementation.

All the criteria were found to be important to the respondents. Five criteria (program content, Web page accessibility, learner’s participation and involvement, Web site security and support, and institution commitment) had a mean score of more than 4.0 while the rest were below 4.0 (interactive learning environment, instructor competency, and presentation and design).

2.2.0 STUDIES RELATED TO E-LEARNING TOOLS

Agboola (1999) conducted a study on "Assessing the Awareness and Perceptions of Academic Staff in Using E-learning Tools for Instructional Delivery in a Post-Secondary Institution: A Case Study". The study aimed at investigating the preparedness of the academic lecturers for the introduction of e-learning at the International Islamic University Malaysia. According to the researcher “e-learning is where the knowledge is delivered via electronic media (the Internet, intranets, extranets, satellite broadcast, audio/video tape, interactive TV, CD-ROM).” The study employed two types of instruments. The first was “Lecturer E-learning Perceptual Survey Questionnaire (LEPSQ)” with 35 items on a 7-point Likert scale ranging from
“very strongly disagree” to “very strongly agreed”, used for collecting data from a proportional stratified random sample of 324 academic staff of the International Islamic University Malaysia. Another was the “E-Learning Readiness Survey” questionnaire, with 20 items based on short answers that were designed to collect data from 26 Deans or Heads of department in each department of the University.

The collected data was analyzed qualitatively based on the analytic procedures. The researcher applied correlation analysis, ANOVA and linear regression to test for the interactions among the variables of the study. The response rate was 98% totaling 324 respondents. Initial findings revealed that e-learning training and e-learning confidence were statistically significant predictors of both e-learning adoption and e-learning readiness.

The study also revealed that academic staff was making progress, but more efforts would be worthwhile to overcome some hindrances, which were related to infrastructure and lack of personal capability. According to the researcher, e-learning confidence and e-learning training have a strong influence on both e-learning adoption and e-learning readiness when compared to the influence of the gender on e-learning adoption and e-learning readiness.

Hermann, A. (2001) has undertaken a meta-analysis review to study about the “Web-Based Instruction and Learning: What Do We Know from Experimental Research?” This narrative review examined the published findings from experimental studies dealing with web-based instruction (WBI) and measured learning effects. Particularly, the review divided relevant research into media comparison studies, into studies which tested conditions for successful WBI learning, and into studies focused on individual differences that exist in learner behavior to WBI. Results of the analyzed studies showed that WBI learning is at least as effective as traditional classroom learning, although there are many different factors contributing to these findings.

It was found that, more than new mechanism of web-based learning, traditionally known factors were tested to influence WBI learning. Also, conceptual and methodological shortcomings of the reviewed studies limit the generalizability of the findings in the field of WBI research.
Hong, Lai and Holton (2003) conducted a study to know Students’ Satisfaction and Perceived Learning with a Web-based Course. The study explored students’ responses and reactions to a Web-based tertiary statistics course supporting problem-based learning. The study was undertaken among postgraduate students in a Malaysian university.

The findings revealed that the majority of the students were satisfied with their learning experience and achieved comparable learning outcomes to students in the face-to-face version of the course. Students appreciated the flexibility of anytime, anywhere learning. Majority of the students were motivated to learn and had adequate technical support to complete the course. Improvement in computer skills was an incidental learning outcome from the course. The student-student and student-teacher communication was satisfactory but a few students felt isolated learning in the Web environment. These students expressed a need for some face-to-face lectures. While majority of the students saw value in learning in a problem-based setting, around a third of the students expressed no opinion on, or were dissatisfied with, the problem-based environment. They were satisfied with the group facilitators and learning materials but were unhappy with the group dynamics. Some of the students felt unable to contribute to or learn from the asynchronous Web-based conferences using problem-based approach. Some of the students were not punctual and were not prepared to take part in the Web-based conferences.

The findings have suggested a need to explicitly design an organising strategy in the asynchronous Web-based conferences using problem-based approach to aid students in completing the problem-based learning process.

Munoz and Duzer (2005) carried out a study titled "A Comparison of Satisfaction with Online Teaching and Learning Tools". This study compared the user experience between the leading proprietary solution, Blackboard (an e-learning tool), and the leading open source solution, Moodle (another e-learning tool). They established a control group that only used the proprietary solution and two study groups, a faculty group and a student group that used the open source solution, but had previous experience with the proprietary solution. The researchers also used online surveys to compare the user experience of the basic functionality of each system such as communication tools, student-student interaction tools, student-instructor interaction
tools. The study was conducted at California State University Monterey Bay and included five upper division courses with the learning management systems used as an adjunct to a traditional face-to-face delivery modality. They developed a questionnaire which consisted of the 20 questions to which the participant has to respond on a five-point scale. The survey came with the finding that most of the participants preferred moodle to blackboard.

2.3.0 STUDIES RELATED TO COMPARISON OF ELECTRONIC MODE AND FACE TO FACE MODE

Jeffrey, V (2000) This research asked whether there was a difference in student outcomes in courses taught in both Internet-based and campus-based formats. Thirty-four courses were offered in both Internet-based and campus-based formats at Nova Southeastern University (Florida) during fall term 1999, enrolling 1,613 undergraduate and graduate students.

Outcomes were evaluated on two dimensions: successful grades (D+ or better) and course completion rates (completers vs. non completers). Statistical analysis revealed that the campus-based format was the most successful for undergraduates, with grades 11 to 13 percent higher and completion rates 14 percent higher.

However, undergraduates' final grades were not significantly different in the Internet-based or campus-based formats. Graduate students performed better in Internet-based than in campus-based sections, for grades overall, for completion rates, and for final grades. The study found that both undergraduate and graduate students had high rates of success (greater than 75 percent for grades) and completion (greater than 80 percent).

Ladyshewsky (2004) conducted a study of comparing E-learning with face to face in terms of differences in the academic achievement of postgraduate business students. The objective of the study was to examine differences in electronic learning (EL) and face to face (F2F) learning. This study examined 1401 students performance (final grade) in nine units offered in both F2F and EL mode over the course of two years. Statistics like t-test, analysis of variance were used to examine various aspects of the study. The effect of age and gender was also considered.
Students, on average, did better in the EL mode although at the individual unit level there were minimal if any significant differences. Age and gender did not appear to moderate performance in any way except for those students under 33 who did better, on average, in the EL mode.

Benoit, William, Benoit, Pam and others (2006) conducted Meta-Analysis of the Effects of Traditional versus Web-Assisted Instruction on Learning and Student Satisfaction. They tried to report the preliminary findings for an on-going project investigating the effects of traditional versus web-assisted instruction through meta-analysis. They collected and meta-analyzed the results of a group of studies on the impact of web-assisted instruction on learning and student satisfaction.

Results of the sample of studies collected indicate that web-assisted instruction is not associated with significantly more learning than traditional instruction in these studies. On the other hand, student satisfaction is significantly lower for web-assisted than traditional instruction. The effect sizes for both variables were heterogeneous.

IGNOU (2008) is presently undertaking a research project to map the status and critical issues of current e-learning services in India against the current implementation of quality assurance methodologies for e-learning in Canada, Australia and Europe (at least three countries including Germany). The outcome of the project is expected to be a study on "Quality in e-learning services in India and e-learning quality guidelines" which would be of great use for the policy makers, e-learning services providers and quality assurance institutions in India. The study is considering to take into account the existing and upcoming national policies on "IT and Education" in India. The basic objective of the study would be to develop a study on e-learning services in India. Further details about the project can be found at http://www.ignou.ac.in/clearnservices/Home.htm.

2.4.0 SUMMARY OF THE REVIEW
The review of the literature strongly helped in supporting the views expressed in the first chapter. The studies reviewed can be categorized under following three categories:

- Studies related to e-learning readiness, practices, status and its implementation.
• Studies related to E-learning tools
• Studies related to comparison of electronic mode and face to face mode.

2.4.1 STUDIES RELATED TO E-LEARNING READINESS, PRACTICES, STATUS AND ITS IMPLEMENTATION

The studies carried out by Reddy et al (2001), Jamlan (2004), Hiroshi (2005), C. Paul Newhouse et al (2006), Proctor and Burnett (2006), Smart and Cappel (2006), Buenafe et al. (2007), Hasan, Nafukho & Muyia (2007), Leem et al. (2007), Cheolil (2007), Jennifer et al. (2007), Alaa (2007), Yair (2007), Unwin (2008), Lee et al (2009), Kaur and Abas (2009), Al-Fadhli (2009), Fetaji and Fetaji (2009), Kay and Seamus (2009) fall in this category. All the studies were survey studies and mostly questionnaire was used in all these studies. Apart from the questionnaire, some researchers also used focus groups, interviews, case studies etc to collect the data for their studies. The number of items included in these questionnaires ranged from 23 items to 60 items. The questionnaires consisted of both closed and open ended questions. In a study carried out in Africa, critical analysis of relevant literature and case studies was used as a tool for data collection. Most of the questionnaires contained questions related to various aspects like advantages of e-learning, effectiveness of e-learning, role of e-learning in improving the skills, satisfaction and dissatisfaction of the stake holders with reference to e-learning etc.

The positive findings of the studies are as follows:
• E-learning helps in construction of knowledge
• Its flexibility is its biggest advantage
• It provides independence to the learners
• E-learning proved to be a powerful tool in reaching the undeserved people.
• The studies also say that the factors for the success of e-learning can be studied under categories like instructor, students, information technology, university support etc.
• Most of the staff have positive opinion towards e-learning and believe that it has the potential to support their teaching related activities.
• One of the study even reveled that e-learning can play an important role in enhancement and development of students critical thinking.
The study carried out by Fetaji (2009) suggested 18 factors as proper e-learning indicators. These factors are: These factors were (1) learner educational background (2) computing skills level (3) type of learners, (4) their learning style and multiple intelligence (5) obstacles they face in e-learning (e-learning barriers) (6) attention (7) content (suitability, format preferences), (8) instructional desing, (9) organizational specifics, (10) preferences of e-learning logistics (11) preferences of e-learning design (12) technical capabilities available to respondents (13) collaboration (14) accessibility available to respondents (15) motivation (16) attitudes and interest and (17) performance-self-efficacy (the learner sense their effectiveness in e-learning environment) (18) learning outcomes.

Some of the negative aspects that came out from the studies are:

- The time allotted to complete the modules was very less
- Robustness and usability of platform is a factor for dissatisfaction.
- In a study carried out in Korea, it was revealed that institutions have lack of meaningful support system and opportunities to participate in e-learning nor did they have proper institutional support or policies needed to improve the quality of e-learning.
- Staff feels that they have limited competence and little experience in e-learning.
- Factors like lack of infrastructure, lack of digital content, cost of implementation, lack of proper training etc acts as hindering factors in e-learning development.

Suggestions revealed in these studies are

- Technological and human resource pre-requisite supports should improve
- Staff training must be provided
- The integration of e-learning should be carefully planned based on learners characteristics, course content and learning content.
- Stake holders’ satisfaction especially teachers and students play an important role in success of e-learning.
- E-learning can play an important role in providing lifelong learning.
• Universities will have to introduce strategies and policies which implement flexible academic frameworks, innovative pedagogical approaches, new forms of assessments.

2.4.2 STUDIES RELATED TO E-LEARNING TOOLS

Studies conducted by Agboola (1999), Hermann A (2001), Hong, Munoz and Duzer (2005) fall under this category. All these studies used survey questionnaire. In the study conducted by Munoz (2005) and others, they used online survey questionnaire. The number of items in these questionnaires ranged from 20 items to 35 items. They used rating scale ranging from 4 point scale to 7 point scale. The components in the questionnaires included e-learning confidence, e-learning training, facilitators’ support, quality of learning material, technical issues, participants interaction etc. Descriptive statistics were mostly used in these studies, apart from this, in some of the studies correlation analysis, ANOVA, linear regression were also used to analyze the data. The major finding from these studies is that e-learning confidence and e-learning training have strong influence on e-learning adoption and readiness.

2.4.3 STUDIES RELATED TO COMPARISON OF ELECTRONIC MODE AND FACE TO FACE MODE

The studies conducted by Jeffrey. V, Ladyshewsky, Benoit and other fall under this category. These studies were also survey studies. Achievement test, collection of earlier conducted studies (meta analysis) were used as a tool for the study. From these three studies, it was observed that surveys could not come out with a strong finding on which mode is more effective. Also the difference found between these modes is minimal and so clear findings could not come.

2.5.0 IMPLICATIONS OF THE REVIEW OF RELATED LITERATURE FOR THE PRESENT STUDY

The review of related literature proved to be very useful to the researcher as it provided the researcher an in-depth knowledge and understanding about various
aspects of e-learning. Researcher could get an idea about the factors that play an important role in e-learning, about the factors that determine the success of e-learning, about the nature and type of the study that can used to pursue the current research. The studies also provided a clear direction about the type of the tool to be used, components to be included in the tool and also about the statistics that can be used to analyze the collected data. Studies conducted by Fetaji (2009), Hasan(2007), Jamalan (2004) etc. helped the researcher in providing guidance on the factors that should be studied. Thus the review of related literature provided a strong base and helped the researcher a lot. The studies conducted by Reddy et al. (2001), Jennifer et al. (2007) revealed that the real effectiveness of e-learning can be better judged by its various stake holders like, students, module developers etc. Hence, the investigator feels that there is a need to conduct research studies to study the experiences of various stakeholders involved in e-learning. Further, the studies conducted by Leem(2007), Cheolil (2007) reveal that there is a need to conduct studies that focus on the status of e-learning in educational institutions and business organizations. These studies also bring front the point that, in order to measure the success of e-learning programmes and also to enhance the educational competitiveness of education system there is a need for carrying out more research studies on how e-learning is adopted in educational institutions and organizations. Further, study conducted by Leem. et.al, (2007) reveals that the tools used in the studies can be sent via e-mail and the responses can be collected via e-mail, fax, mails etc. It is also clear from the review that majority of the studies adopted normative- survey research method and Teachers, students, Instructors, subject experts etc constituted the sample of most of the studies. Majority of the researchers used questionnaires, opinionnaires and interview schedule as tools for collection of the data. Further, the studies also reveal that majority of the studies in the field of e-learning were conducted outside India in various other countries like Cambodia, South Africa, Korea, Egypt etc. Hence, in the present scenario where e-learning is becoming an emerging trend in our country investigator feels a strong need for the present study.