CHAPTER 1: INTRODUCTION

1.1 RATIONALE OF RESEARCH STUDY

The education policy and its implementation for any country is the foundation for transformation and training of human resources according to the long term perspective of sectorial development mix, inculcating in national interest, commitment to social responsibilities and developing the loyal and true citizen of country.

During the British rule Lord Macaulay design the India’s education system to meet their administrative requirements. After political freedom in 1947 our government reframe the education system to meet the requirements of plan development of economy as envisaged in our five year plans. With the changing dynamics of development, our government restructured the system of education namely 10+2+3. This system is focus for promoting the need base professionals and quality of human resources of the economy.

During 1989-90 our government realized that economy has reach to the stage of maturity and education is the jet engine of catching the global development. In 1991 the government introduced economic reforms. These reforms have explored the opportunities of higher learning through digital technology. India has made revolutionary change on this planet in information technology. Our country now has potentiality and capability to be emerge as a super power in this planet. But its nucleus lies on the professional education of human resources. We have demographic dividend in global world, therefore the educating professionally and enhancing skill mix of this human resources is the immediate target of the country.

In order to reach to the target of educating professionally with skill mix to the vast young population spread over vast geographical areas is a harculious task before the country. Therefore, an attempt is made to explore the E-learning model practiced in developed countries. However, India is a developing country and there is a heterogeneity between developed countries and developing country. So, grass root probe will be conducted for E-learning model(ELM) of developed countries. 87
On the basis of in-depth analysis of operational E-learning model (ELM) and exploring probable applications in India, will help to identify the problems of ELM and opportunities to be exploited. Thus the research exercise will lead to destination of producing an refined and suitable model of ELM for India.

1.2 BACKGROUND

Information and Communication Technologies (ICTs) are generating a new global economy, which gets its power from technology, fuel from information and knowledge takes the driving seat (Tinio). 102

These technologies provide the electricity of information-age (Macleod) to construct an information-society or knowledge-economy. However, technological innovations and applications are founded on the education system of a country. For example, any digital initiative is fueled by a batch of ICT-professionals to develop and users to apply technologies for organizational objectives. 62

Given that, it is the education system which helps nations in harnessing ICTs for government, business, agriculture, banking and education by generating a skilled workforce. However, this requires the education system itself to be computerized first and then educate the masses in adopting computers into their informal and formal lives (COST). 23

Within education, ICTs have started emerging. In the western european context, it is now common to integrate ICT into logistical12, organizational and educational functions of HEIs (Valcke; Baumeister) showing that ICTs are changing the nature of work and the workplace for all the university constituents. 110 UNESCO reports that the use of ICTs in and for education is rapidly expanding in many countries and considered both as a necessity and an opportunity 108. Sife et al., found that ICTs are changing the organization and delivery of higher education
because they are adopting alternatives to the traditional classroom pedagogy and developing a variety of e-Learning courses. Research also suggests that ICTs offer new learning opportunities for students (e-Learning), develop teacher’s professional capabilities (e-Pedagogy) and strengthen institutional capacity (eEducation) and most universities today offer some form of e-Learning. 96

Furthermore, the concept of globalization calls to address poverty and inequality in developing countries by the global diffusion of digital technologies (Macleod) 62. He argues that the diffusion of ICTs is correlated with the overall level of socioeconomic development and that ICTs play vital role in enhancing economic growth and reducing poverty. UNESCO reports that in the context of globalization and newly emerging knowledge economies, higher education is recognized as an essential driving force for national development in both developed and developing countries 8. Roknuzzaman asserts that HEIs of any state are deemed to be the pioneers in adopting ICTs. 106 Thus, the new global economy has serious implications for the nature and purpose of educational institutions. ICTs affect the way students learn, teachers teach, administrators administrate and the leaders lead the university (Nyang) 74

It is reported that education is the major consumer of software applications and web services (Buzhardt and Heitzman-Powell) indicating that e-Learning is widening the picture of education thereby creating several stakeholders including knowledge-industry, academia, designers, policy makers and other institutions involved in ICT-based higher education. 18

E-Learning offers a great and exciting opportunities for both educators and learners. The knowledge revolution and economic globalization has created knowledge-based industries who work on the basis of computer-literate workforce thereby forcing all the countries to restructure their educational system to include digital literacy with priority (Ezziane). 33

Despite the theoretical benefits that e-Learning systems can offer, difficulties can often
occur (Graff et al.) 39. The reported impacts of ICTs in education have not been as extensive as in other fields (Oliver) 80 and these have hardly impacted the actual teaching approaches and practices (Valcke) 110. The marriage between education and technology has often been rocky (Buzhardt and Heitzman-Powell) facing problems like, language barrier, absence of prerequisites, technology hurdles and so on. Given this, e-Learning is still often used only as a buzz word, and its deep impact on educational institutions is not seen. Thus, the efforts for the integration of ICTs in higher education are reportedly struggling with several problems. Researchers have pointed out that there are a number of challenges for the universities in developing countries when they implement the e-Learning systems. 18

It has been found that the use of ICTs is dependant on the perceptions of developers and users about the nature of technologies and their role in different walks of life. (Walsham, 2000:105). have found that ICT-related changes are not perceived as a collective experience or social change rather, personal challenge. An analysis of the literature suggests that two broader theories are discussed over and over across the literature saying that ICTs can either play instrumental or substantive role in the learning process. Instrumental view asserts that ICTs are just technologies and their role depends on their use while substantive view posits that these technologies have the power to change the society and their mere existence can make the difference 111. Likewise Jonathan Ezer, classifies this issue into instrumental and liberal conceptions of e-Learning. The effective use of IT/S in organizations requires the sensitive handling of human issues in addition to the technical matters. 32

Difficulties can often occur when systems are not designed with consideration to learner perceptions, characteristics (i.e., gender, learning-style), and the context of use. The teachers and students differ in their perception, attitude, and learning styles therefore benefit more if ICTs match with their individual learning preferences (Cagiltay et al.). Similarly at the group and organizational level. 20

The role of context, within which ICTs are used, is consistently identified by
almost every research study on the integration of educational technologies (Sasseville). The construct of context is multifaceted as it includes community, culture and technology and this is important when it comes to understanding implementation of ICT (Nyvang). Thus, the context can either be a support or a barrier in the way of e-Learning-project-trajectory.

Who benefits from IT/S in the developing countries is not determined by the technology, but is related to human choices concerning technology use. So, e-Learning can not be purchased off-the-shelf therefore, all the developed and developing countries are making efforts to control the problems and yield maximum out of ICTs. India is making all out efforts to bring digital revolution in the higher education system. Last decade has seen huge government funding into the universities in terms of providing hardware facilities in HEIs. Similarly, government has created an infrastructure for internet and connected thousands of villages, towns and cities with the globe. All government websites show determination to bring e-Learning revolution not only for the HEIs rather for LLL and EFA (HE 2013). Given the number and intensity of e-Learning development and use problems mentioned above, e-Learning is more than technology and it is not simply the purchase of one or another hardware and software (COST).

Supply of technological infrastructure is not the guarantee for appropriate use of the systems. There is need for the motivation and involvement of users with clear objectives about the application of digital tools in pedagogy, learning and institution management. The findings of empirical study reveal that ICTs are playing supplemental or instrumental role in the teaching and learning practices in India.

There is absence of evidence about the benefits of e-Learning in learner's performance, however, the expanded use of computers in education continues. Therefore, research is needed in every country to underline their own native contextual and user demands for ICT tools Paul P.K., Mondal N.K. This study aims at identifying the contemporary
conditions with regard to e-Learning in the HEIs of India through an empirical study of the sample institutions from Pune, Mumbai, Hyderabad, Goa, Bangalore, New Delhi and affiliated training institutions among area to come up with a customized solution model to effectively convert ICTs into e-Learning, e-Pedagogy and eEducation. (Sachin Patil) 87.

Government aided many college students to get a tablet at subsidized rates for quality education as a part of National Mission on Education through Information and Communication Technology (NMEICT). NMEICT is a Centrally Sponsored Scheme to use ICT in teaching and learning process for the benefit of all the students in Higher Education Institutions.

1.3 PROBLEM STATEMENT

Despite the promising nature of e-Learning solutions, research is consistently identifying issues in the development and use of ICTs in HEIs in both developed and developing countries. Human, organizational, and contextual problems are widely reported as the critical factors to make or break the e-Learning initiatives in any HEI. This study is an effort in the same line of research to explore the context of HEIs in India, India with a view to understanding the native context and developing a domesticated e-Learning model for local application of ICTs for pedagogy, learning.

1.4 RESEARCH PROBLEM

The problem can be split into two parts –

a. Challenges faced by the Students at Indian Education and Training Institutions : Major of Bandwidth Issue And Connectivity, Computer Literacy And Digital Divide, Lack of Quality E-Content, Language Barrier, Low Adoption Rate, Awareness, Its very difficult to implement the e-Learning technology.
b. Challenges faced by the Teachers/Trainers/Administrators at Education and Training Institutions: ICT infrastructure. Lecturers with very low ICT skills, Inadequate ICT staff to train users of the e-learning system, Low motivation for lecturers to blend e-learning into their face to face lectures, High cost of accessing e-learning by non-residential students, Inadequate finance for acquisition of ICT infrastructure.

1.5 RESEARCH QUESTION

1. What the major issues for adoption of e-learning?
2. Which are the behavioral factors influencing adoption of e-learning among students?
3. What are the actual requirements to implement and run the e-Learning technology with perception of training.
4. What are the gaps in the policies of the Indian Higher Education for using the ICT?

1.6 RESEARCH OBJECTIVES

Given the scenario in the background, e-Learning is either a threat or opportunity for the HEIs of the world in general and developing countries in particular (Sachin, 2014). However, as argued above, the benefits are subject to the ability of developers and users to harness the technologies and change their context simultaneously as to create a customized and localized match between the requirements of e-Learning and objectives of a particular institute, community, or state. This requires research on the nature of technologies, native context and the relationships between the two at the moment and in future. Thus, the objectives of this research-project can be classified as under: 87
1. To examine the technological factors influencing adoption of e-learning (among student fraternity).

2. To understand the behavioral factors influencing adoption of e-learning among students.

3. To explore the need of educating and training the population of India to materialize demographic dividend with special reference to e-learning education and training for education and training institutes.

4. To examine the opportunities of e-learning in education and training institutes in India, on the basis of global literature survey and empirical study of the local environment.

1.7 SIGNIFICANCE

1. The use of ICTs are increasing communication among students and teachers, providing access to so far inaccessible resources, encouraging authentic learning because learners can access real-world data that is not provided by textbooks.

2. At the international level, various agencies such as the World Bank, UNESCO, United Nations, and G8 countries have adopted a digital divide framework (Macleod). 62

3. e-Learning plays dominant role in minimizing the impacts of digital divide particularly in the context of developing countries (Macleod, 2005). 62

4. (Abrami et al.) Successful development and use of e-Learning technologies is new, difficult, and challenging to practitioners, researchers, and policymakers (Qureshi et al.). 83
5. If used wisely, ICTs can break down barriers to learning that are faced in traditional classroom-based instruction (Kuriloff).57

6. Research is unveiling that if harnessed appropriately; technology tools facilitate the learners in developing higher order thinking skills (Abrami et al.).83

7. ICT solutions may help to solve problems related to education such as teacher shortages, high drop-out rates, low achievement, lack of opportunity, and lack of materials (Wells).113

1.8 BRIEF METHODOLOGY

The various kinds of discussions with the expertise and honorable guide of mine. In the pilot study, unstructured conversational telephonic interviews were conducted. Based on these interviews and secondary data, research objectives and hypotheses were formulated. Primary research, questionnaires were framed and taken a responses from Pune, Mumbai, Hyderabad, Goa, Bangalore, New Delhi universities. Some of the questionnaires were self-administered while some of them were sent via email and Google docs to the institution and respondents. However, researcher met most of the respondents personally, which has provided good background for this work.
Data collection process got over by January 2014 after which data coding and analysis work begin. For the data analysis, firstly Factor Analysis is used to identify the prominent factors out of the various ones. Afterwards, Test of normality, correlation regression ANOVA and chi square is used to test hypothesis.
1.9 SCOPE OF THE STUDY

This study tries to analyze and understand the problems and challenges faced by the Indian institution while using e-Learning for teaching and learning process.

Also study explore the need of educating and training the population of India to materialize demographic dividend with special reference to e-learning education and training for education and training institutes.

Implementation of e-Learning and its impact on education sectors are also analyzed. The study is conduct on major education hub cities like Pune, Mumbai, Hydrabad, Goa, Banglore, New Delhi , their institutions strategies and strengths will help other regions of Indian education institutions to plan to make e-Learning successful. Interviews are conducted with e-Learning consultants to understand about methodology. Also interviews are conducted with Teachers, Administrators and Students at live environment.

The main focus of study is to examine the technological factors and behavioral factors influencing adoption of e-learning among student fraternity. The samples for data analysis are taken from major cities like like Pune, Mumbai, Hydrabad, Goa, Banglore, New Delhi which known as education hub.
### 1.10 ORGANIZATION OF THE THESIS

**Table 1.1 Logical and Physical Organization of the Thesis**

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<th>Chapter</th>
<th>Question Answered</th>
<th>Purpose</th>
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<td>What are we talking about?</td>
<td>To highlight the significance and dimensions of the issue.</td>
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<tr>
<td>3 Profile of Cities</td>
<td>Which cities taken for data collection? Why taken that cities?</td>
<td>To identified the cities for data collection according to some relevant parameters.</td>
</tr>
<tr>
<td>4 Research Design</td>
<td>How to investigate the e-Learning experiences in HEIs?</td>
<td>To develop a customized model for research in the local environment.</td>
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<td>5 Global Experiences of e-Learning</td>
<td>What is happening to e-Learning in HEIs of the Globe?</td>
<td>Analyzing the experiences of advanced and developing countries including India.</td>
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<td>e-Learning Theories and Practices in HEIs of India?</td>
<td>Exploring the current theories and practices in the HEIs of India.</td>
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<td>7 Discussions</td>
<td>What are the similarities and differences between Global and National/Local experiences?</td>
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