

Chapter II

LITERATURE REVIEW

2.1 Introduction

The concept of distance education has been in the world of learning since a long time. The motive to provide education to each and every section of the society helped distance education to flourish and take new turns. With the development of radio during the First World War, education found a new medium of delivery. The coming of television initiated a totally new dimension by providing an audio-visual medium for carrying knowledge and information. Soon, many educational institutions experimented with the use of these electronic media to deliver instruction at a distance. With Charles Wedemeyer's innovative uses of media technologies at the University of Wisconsin during 1986, paved a way towards using new technologies for the development of distance education. With the rapid growth in technologies and evolution of systems for delivering knowledge, distance education could reach individuals even at remote distances with ease.

2.1.1 Distance Education

Both developed and developing countries around the world have been exhibiting unprecedented interest in the emerging phenomenon of distance education. Empirical findings of a few of the important studies conducted in the field of distance learning have been discussed here. This section covers the books and journal articles available

in the area of distance education. The reviews are on the areas of relevance of distance education, its management, and challenges faced.

Distance Education in Asia and the Pacific: Country Papers (1993) is a study conducted by the National Institution of Multimedia Education, Japan, to survey the existing distance learning resources in the region. The author of the paper '**India**', **Ruddar Datt** describes the geography and demography of the country, explaining the need for distance education and its spread so far. The enrolment figures and distribution clearly depicts the distance learning scenario of the country at that particular era, which would help to serve as a base for the study of the present Indian distance education system. The study also delved into the cost and expenditure incurred in the distance learning system in regard to infrastructure, materials and salaries of staff. The author emphasizes on the need for expansion and strengthening of the network of distance learning.

Instruction has fundamentally transformed in a development of several thousand years. Distance education is a form of instruction which is capable of catering for great numbers of students and even 'mass audiences'. **U. K. Singh and K. N. Sudarshan**, in their book "**Distance Education**" (1996), say that such a form of instruction would be impossible without the help of mass media and the computer. According to the authors, distance education would be considered as a system based on rational planning and development just like the organization of industrialized work processes.

Modesto S. Tichapondwa and Daniel R. Tau provide a comprehensive and clear definition of terms like distance education, open learning, correspondence education and so on, in their book '**Introducing Distance Education**' (2009). A

detailed account of the emergence of Distance Education is given by the authors, based on Desmond Keegan's (1996) view of distance learning. Distance education is said to be open because there is no age restriction, no strict adherence to entry qualification, learners' decision in deciding place of study, study timetable, and "no bottlenecks associated with the conventional education system". The process of study materials preparation has also been addressed in details by the authors.

A.W. (Tony) Bates, in his book, "**Technology, e-learning and distance education**", primarily focuses on choosing the right technology at the right cost for distance learning. The book also provides definitions on the concepts of distance education, open learning and flexible learning, along with an overview of use of technology in distance learning field today. The **ACTIONS** framework provided by the author is a very appropriate for selecting and using technology in distance learning, and the present study has been carried out on some of the factors identified in this book. The author discussed both the old and new technologies in details, giving an overview of their uses and benefits. The advantages, disadvantages and necessity of using technology in learning has been explained by the author in details.

Aruna Goel and S.L. Geol, in their book '**Distance Education: Principles, Potentials and Perspectives**' (2009), covered every necessary details of a distance learning environment, right from dealing with the meaning, issues and challenges related with this mode of education. The authors explained the role and necessity of 'Good Governance' for a successful distance learning system with the help of charts and models. The delay or negligence in delivering study materials and providing support to learners seem to arise from problems in administration of the distance learning institution, which would decrease with a high quality governance system.

Student support system is an integral part of the distance learning system, along with quality control. The authors throw enough light on the deterioration of quality in distance education in India during that particular period. The book emphasises on production of high quality instructional materials, establishing rapport between teacher and learners, and awareness creation in regard to distance learning, methods used and technology.

2.1.2 New Media Technologies

Though ‘new media technologies’ is a comparatively new area of study, a good number of studies have been conducted in different parts of the world to provide an overview to the field of study. Some of the significant studies done in the area of new media technologies have been considered in this section.

New media appear with claims and hope attached. They are supposed to deliver “increased productivity and education opportunity and open up new creative and communicative horizons” (Lister, Dovey, Giddings, Grant, and Kelly, 2009). While old media offer passive consumption, new media provides interactivity. **Martin Lister, Dovey, Giddings, Grant, and Kelly (2009)** offers conceptual frameworks to the new media in the book “**New Media: a critical introduction**”, defining the characteristics of new media, new media technologies and its uses in the everyday life. The authors touched upon the recent theoretical developments, approaches and significant technological developments. From the researcher point of view, this book can be useful in understanding the term ‘new media technologies’ and its role in changing the world of communication.

According to **John D. Leckenby**, “new” media are completely new; they have been growing out of the old media, over time, in his chapter on “**The Interaction of Traditional and New Media**” (2005). New media are still evolving and maturing. The authors provide details about the development of the old media – Radio and Television, and the introduction of a new medium – the Internet. The new medium introduced interactivity, which is one of the most important features of the wireless communication. They describe the relationship of old media with the new media, how both the media forms have collaborated to make interactions more convenient. It explores the idea of interactions between various media forms and their development over time. New has formed and developed on the base provided by the ‘traditional’ media forms.

Eugenia Siapera (2012) addresses the relationship between the new media, and the internet and globalization, along with meeting the question of accessing new media, in the book “**Understanding New Media**”. The author also discusses the utilization of new media technologies for political purposes, and their contribution in political deliberations and in creating awareness. For instance, a woman in Iran can ‘Tweet’ about the situation of her homeland which could be read around the world. The digital divide reflect development divide, as more developed a country is, the more likely it is to have a high percentage of new media users. The negative dimensions of new media are also explored by the author, along with specifying its boons. Mobile phones, along with wireless internet and MP3 players, pagers, mobile game consoles, digital cameras, and other mobile media represent the portable feature of new media.

Technological instruments are not advantageous or the opposite in themselves, it is the way they are used determines their value. Marshall McLuhan (2005) highlights the point that ‘the medium is the message’ because it is the medium that shapes and controls the scale and form of ‘human association and action’.

2.1.3 Media Technologies in Distance Education

Many research studies have focused on various technological aspects of distance education operation, the main point in a few studies have been ‘interactivity’ and ‘dialogue’. Interaction is the most important process in distance learning environment as students prefer interactive learning environment (Marten, Valcke & Portier, 1997).

Amat Taap Manshor (1999) forayed into the recent future of the virtual learning or distance learning scenario, as they predicted it to be the common mode of transferring all sorts of knowledge and information in their paper “**Distance education model – the experience of Universiti Telekom (Multimedia University) in Malaysia**” presented at the Pan Commonwealth Forum, 1999. The author also expected that, in this era of information technology, distance learning would play a key role in changing the world into a “borderless educational arena”. Particularly in the developing countries, distance education will become one of the major contributors in enhancing and upgrading the quality and prospects of education. In the recent future, their prediction appears to be true, as the developing countries have found a major medium of development in the form of distance education, especially to reach to its unreached section of the society.

Ashley Ann Skylar conducted a study “**A comparison of online text-based lectures and synchronous interactive web conferencing lectures**” (2009), to compare traditional learning with new online technologies that are mostly adopted by distance education today. The study was conducted among some students in three types of media, i.e. traditional classroom, online classroom and class-in-a-box via multimedia CD-ROMS in order to compare student satisfaction and student achievement. In the results, no significant differences were noticed in the student satisfaction or student achievement levels. All the three environments were equally effective in delivering the instructional content of the course. The study cited scope for further researches concerning the variety of methods used to communicate in distance education, instructional methods.

Sagarmay Deb (2011) pointed out the problems faced by the developing countries in reaping the benefits of multimedia technologies in the improvement of learning process. In his paper “**Effective Distance Learning in Developing Countries Using Mobile and Multimedia Technology**”, he cited the limited spread of these technologies in the third world countries, lack of proper management and infrastructure problems. The development in the field of multimedia technology and internet networks have succeeded in changing the whole philosophy of distance learning by providing the opportunity of close interaction between learners and teachers, even by going to extent of creating virtual class-rooms where teachers and learners are scattered all over the world. The paper also suggested mobile technology to be an affordable and viable media to impart distance education effectively to a large number of people.

In order to understand the Information and Communication Technologies (ICT) and social media, which are integral parts of new media technologies and significant parts of the distance learning process, **Jo Pierson and Joke Bauwens (2011)** provide a detailed account on the developments in new media in their book “**Digital broadcasting: an introduction to new media**”. The authors offer the user benefits of ICT, how has it become a blessing to the field of communication. From the researcher point of view, one can look into the areas that have been left out by the authors, for instance the use of new media technologies in the context of providing education.

According to **Ormond Simpson (2012)**, in his book, “**Supporting students for success in online and distance education**”, the biggest development in the field of distance education in the last twenty years has been the growth in the media used for delivering distance education. It has made a great from the stage when learning materials were delivered mostly in the text form by postal mode and the distance learners had to rely on support through face to face interaction or phone-calls or letters. But today, we have a vast array of media in the forms of CDs, DVDs, search engines, virtual learning environments (VLEs), e-mails, instant messaging, social media, podcasts, webinars, computer forums, wikis, blogs, vlogs (video blogs), and much more. Many educational developments are making use of a mix of text and online systems in the mode called ‘blended learning’. Simpson also pointed out the disadvantages of the wide use of internet and ICT in distance education in terms of delivery and cost, the poor condition of internet facilities in developing countries, where text materials still play a major role.

Shawn Lawson discusses the definitions of New Media, as presented by Lev Manovich, Mark Hansen, and Mark Tribe, and points out that there is no agreed upon definition of the term in his paper “**New media and education**” (2008). He proposes three basic tenets of New Media, in the article: a) by common numerical representation, data is open for subjective representation. At this point all media becomes meta when its individual distinction are not required for processing or use; b) new media reuses the conventions of old media, such as, television, film, radio, telephone and print. The ‘New Media’ conventions are remixed ‘Old Media’ conventions; c) through networking we are able to be tele-present at meetings, conferences or with our family. The internet is the place for public and private information. The author also suggests that it is time for New Media to advance from replicating previous media to doing something new. From the point of my research, this article provides a platform to study the functions of new media techniques that are used for the field of education.

Susan Genden, in her article “**The use of multimedia in online distance learning**” (2005), provides a historical look at the multimedia usage in the field of distance education, giving an account of its emergence and growth. The author mentioned that “when multimedia is combined with distance learning through the internet, it provides the use of technological tools that create more even variety in learning strategies without a teacher present”. The author also pointed out the impact of multimedia usage on distance learning, citing both negative and positive impacts of the technology, one positive affect being the advantageous nature of multimedia usage for students with learning disabilities. The study reviewed a considerable number of available literatures on the subject and draws the conclusion that to meet the learning objectives, a worked out instructional design is required.

The advancement in technology has brought almost a revolution in the world of education, and technology is often regarded as the catalyst of new pedagogical change towards e-learning. The interactive technologies like, video, audio, audio graphics and computer conferencing are capable of providing two-way interactivity among the teacher and learner of ODL. **Desai, Hart and Richards**, have shown in their research paper “**E-learning: Paradigm shift in education**” (2008), that the most improved technologies have enabled universities to implement distance education to reach more diverse populations. The authors also pointed out that the technology-based learning holds many advantages over traditional learning. It has also become evident from the research that the universities and other institutions of higher education are being challenged to examine their existing curriculum as per the distance learning and adjust their mode of operation accordingly.

Poellhuber, Anderson and Roy conducted a study “**Distance students’ readiness for social media and collaboration**” (2011), on students of four large Canadian distance education institutes, to see into the potential of social networking sites in making distance learning more convenient for the learners by increasing the scope of social integration among the learners and teachers. The study also observed the apparent hindrances in the use of this new technology by the distance learners, like lack of expertise in handling the media. The results brought out diverse views and experiences from the learners; it also showed significant age and gender differences, as well as an important institution effect on the students’ interest in collaboration.

Patricia B. Arinto reports in her paper “**A framework for developing competencies in open and distance e-learning**” (2013), part of the findings of a qualitative study of the open and distance e-learning (ODEL) course design practice of

10 academicians of the University of Phillipines – Open University (UPOU). The study is perceived to be important as most of the open and distance learning institutions are changing their mode of delivery from print to online mode. The study tried to describe the impact of this shift towards e-learning in distance education. The findings of the study suggest that “faculty training programmes in open and distance e-learning should aim to develop a comprehensive range of ODeL competencies in a systematic and coherent way”.

An experimental study conducted by **D. Puthira Prathap and K.A. Ponnusamy** in their paper “**Effectiveness of four mass media channels on the knowledge gain of rural women**” (2006) on 144 rural women belonging to self help groups of three villages in Tamil Nadu India, which showed that ‘new media’ have a slight edge over the traditional media in terms of influencing knowledge retention. As the knowledge retention capacity recedes with growing age, it becomes imperative to choose an effective medium that would facilitate retention in an adult. The study experiments the effectiveness of four mass media, radio, television, print and internet on village women; this study could be important for the field of distance education as this form of learning is mostly sought by the adults who could not complete their studies for one or the other reason. The result of the study presented that the respondents in the internet treatment retained the maximum knowledge they gained as compared to those treated with radio or television or print media.

Educators today are trying to determine the goals of education. The internet has changed the rules, the skills that were important in the past may not be that important today. For example, is the ability to calculate a standard deviation or square root important in a computer area? Some of the goals of education are providing

students with the abilities and skills such as problem solving, critical thinking, communication, collaboration (ability to work with others), navigating the internet and find accurate and useful information, and making ethical judgements. An overarching goal is to provide students with a passion for learning. In the internet age, knowledge acquired in the freshman year in college may be obsolete by the senior year, which was established by **Friedman and Friedman**, in their article “**Using social media technologies to enhance online learning**” in 2013.

Alain Dumort presents an overview of the development of new media in the secondary and higher education systems of the European Union and the United States of America, in his paper “**New media and distance education: An EU-US perspective**” (2000). Shifts in pedagogical thinking and technological progress have encouraged widespread use of the educational technologies. European universities are gradually realizing the importance of investing in the field of Information and Communication Technology (ICT). However, the authors have cited that, to significantly improve the education process in the EU and the USA, new media have to be embodied in the complex school or university environment, and be nurtured by new partnership between business and the academy.

Guri-Rosenblit examines the distinct differences between ‘distance education’ and ‘e-learning’ in higher education settings in her paper “**‘Distance education’ and ‘e-learning’: Not the same thing**” (2005). Many policy makers, scholars and practitioners in higher education use these two terms interchangeably as synonyms. But the fact is that distance education in most higher education systems is not delivered through the new electronic media, and vice versa – e-learning in most universities and colleges all over the world is not used for distance education

purposes. 'Distance education' and 'e-learning' do overlap in some cases, but are by no means identical. The lack of distinction between 'e-learning' and 'distance education' accounts for much of the misunderstanding of the ICT roles in higher education. The article examines the incorrect assumptions on which many exaggerated predictions as to the future impact of the ICT were based upon, and it concludes with highlighting the future trends of 'distance education' and 'e-learning' in academia.

Use of new media technologies could be a method in improving the retention of students in open learning system. **Bharat Inder Fozdar and Lalita S. Kumar** conducted a survey in their paper "**Mobile learning and student retention**" (2007) to determine the importance of using mobile technology in improving student retention at Bachelor of Science programmes at Indira Gandhi National Open University in India. The results showed that the biggest advantage of this technology is that it can be used anywhere, anytime and it provides access to a large number of learners, as the mobile users are increasing in the country. In a developing country like India, less expensive SMS-based mobile technologies like mobile phones have a lot of potential in improving communication and learning.

Lim, Fadzil and Mansor, in their research paper "**Mobile learning via SMS at Open University Malaysia: Equitable, effective and sustainable**" (2011), discuss the pilot project undertaken at the Open University Malaysia for enhancing the blended learning approach for distance learners. Text messaging was chosen for the initiative, over other mobile technology applications because it is the lowest common denominator of all mobile technologies. The initiative helped the learners to learn anytime and anywhere and to manage their studies better. Mobile learning helps

reduce the transactional distance of psychological and communication space often faced by distance learners who are separated in terms of geographical distance and time. it is found to be sustainable in terms of costs, efforts and resources.

The value of using social networking sites in education has been a matter of discussion since a long time. **Ellen S. Hoffman (2009)** examines some social networking tools available for use by educators, along with exploring in greater depth, the use of a particular tool ‘Ning’ in a distance education course. The case study supports the more “sophisticated recognition” that technology is only a tool that is successful when carefully assessed to meet learner needs and course goals. When technology supports an positive, constructivist learning environment and contributes to successful pedagogical strategies, the result of formative evaluation of social networking potentials for distance learning is positive (Hoffman, 2009).

References

- Ruddar Datt. (1993). India. In H. Katō & S. Wong (Eds.), *Distance education in Asia and the Pacific: Country papers* (pp. 57-95). Retrieved from www.unesco.org/education/pdf/53_23b.pdf
- U. K. Singh & K. N. Sudarshan. (1996). *Distance education*. New Delhi: Discovery Publishing.

- Modesto S. Tichapondwa, M. S., & Daniel R. Tau. (2009). *Introducing distance education*. Retrieved from <http://oasis.col.org/handle/11599/424>
- Tony Bates. (2004). *Technology, open learning, and distance education*. London: Routledge.
- Aruna Goel & S. L. Goel. (2009). *Distance education: Principles, potentialities and perspectives*. New Delhi: Deep & Deep Publications.
- Martin Lister, Jon Dovey, Seth Giddings, Iain Grant & Kieran Kelly. (2009). *New media: A critical introduction*. Milton Park, Abingdon: Routledge.
- John D. Leckenby. (2005). The interaction of traditional and new media. In M. R. Stafford & R. J. Faber (Eds.), *Advertising, promotion, and new media* (pp. 3-27). Armonk, NY: M.E. Sharpe.
- Eugenia Siapera. (2012). *Understanding new media*. New Delhi: SAGE.
- Marshall McLuhan. (2005). *The medium is the message*. Corte Madera: Gingko Pr.
- R. Martens, M. Valcke & S. Portier. (1997). Interactive learning environments to support independent learning: the impact of discernability of embedded support devices. *Computers and Education*, 28(3). 185-197
- Amat Taap Manshor. (1999). Distance education model – the experience of Universiti Telekom (Multimedia University) in Malaysia. Retrieved from <http://oldwebsite.col.org/forum/casestudies.htm>
- Ashley Ann Skylar. (2009). A comparison of online text-based lectures and synchronous interactive web conferencing lectures. *Issues in Teacher Education*, 18(2), 69-84. Retrieved from etec.hawaii.edu/otec/classes/645/EJ858506.pdf
- Sagarmay Deb. (2011). Effective distance learning in developing countries using mobile and multimedia technology. *International Journal of Multimedia and Ubiquitous Engineering*, 6(2), 33-40. Retrieved from www.sersc.org/journals/IJMUE/vol6_no2_2011/4.pdf
- Jo Pierson & Jake Bauwens. (2011). *Digital broadcasting: An introduction to new media*. Bloomsbury Publishing.
- Ormond Simpson. (2012). *Supporting students for success in online and distance education* (3rd ed.). New York: Routledge.
- Shawn Lawson. (2008). New media and education. Retrieved from <http://www.shawnlawson.com/wp-content/.../01/NewMediaAndEducation.pdf>
- Susan Genden. (2005). The use of multimedia in online distance learning. Retrieved from <http://www.gendendesign.net/pdfs/MultimediaUse.pdf>

- Mayur S. Desai, Jeff Hart & Thomas C. Richards. (2008). E-learning: Paradigm shift in education. *Education*, 129(2), 327-334. Retrieved from <https://wilkesresearch.wikispaces.com/file/view/elearning-paradigm.pdf>
- Bruno Poellhuber, Terry Anderson & Normand Roy. (2011). Distance students' readiness for social media and collaboration. *The International Review of Research in Open and Distributed Learning*, 12(6), 102-125. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1018/1992>
- Patricia B. Arinto. (2013). A framework for developing competencies in open and distance e-learning. *The International Review of Research in Open and Distributed Learning*, 14(1), 167-185. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/1393>
- Puthira Prathap & K. A. Ponnusamy. (2006). Effectiveness of four mass media channels on the knowledge gain of rural women. *Journal of International Agricultural and Extension Education*, 13(1), 73-81. Retrieved from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1966865http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1966865
- Linda Weiser Friedman & Hershey H. Friedman. (2013, January). Using social media technologies to enhance online learning. Retrieved October 9, 2013, from <http://www.thejeo.com/Archives/Volume10Number1/Friedman.pdf>
- Alain Dumort. (2000). New media and distance education: An EU-US perspective. *Information, Communication & Society*, 3(4), 546-556.
- Sarah Guri-Rosenblit. (2005). 'Distance education' and 'e-learning': Not the same thing. *Higher Education: The International Journal of Higher Education and Educational Planning*, 49(4), 467-493. Retrieved from <http://eric.ed.gov/?id=EJ733414>
- Bharat Inder Fozdar & Lalita S. Kumar. (2007). Mobile learning and student retention. *International Review of Research in Open and Distance Learning*, 8(2), 1-18. Retrieved from <http://eric.ed.gov/?id=EJ800952>
- Tina Lim, Mansor Fadzil & Norziati Mansor. (2011). Mobile learning via SMS at Open University Malaysia: Equitable, effective and sustainable. *The International Review of Research in Open and Distributed Learning*, 12(2), 123-137. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/926/1791>
- Ellen Hoffman. (2009). Evaluating social networking tools for distance learning. In *Proceedings of TCC Worldwide Online Conference* (pp. 92-100). Retrieved from etec.hawaii.edu/proceedings/2009/hoffman.pdf