CHAPTER- 2

REVIEW OF RELATED LITERATURE

Review of related literature on the topic or problem area helps the investigator to acquire thorough knowledge of the topic chosen for research. The review of literature also helps to gather knowledge required for the next steps up to the writing of the research report.

In order to conduct the study, a number of published articles and books were consulted. For the purpose of organising the related literature available on the topic under study, thematic classification has been done. Literature reviewed has been presented thematically under the following headings:-

1. Distance Education,

2. Distance Learners

3. LIS Education

4. ICT and Distance Education

5. Case studies

6. Teaching Methods
Kulandai Swamy and Srinivasan (1994) opine that education today is a means of social and economic uplift. A nation needs it for development and an individual demands it as a right. Distance education assumes great significance as it is no longer a choice but a compulsion of time. It has origin in correspondence education. But DE is more than correspondence education both in scope and dimensions. They discuss new demands and challenges paving way for the promotion and establishment of DE as a system. Seth and others (1996) state that life long education is a cherished goal of the educational process. The open and distance education system has proved to be a powerful instrument to achieve this laudable result, nevertheless, there is a considerable lack of clarity in understanding them even among the academicians. The later refers to mode of education while the former signifies flexibility in the opportunities for learning, flexibility in admission requirements, periods of study, duration of programmes and choice of subjects etc. Thus, it is a highly welcome step in the direction of taking education to the doors of those willing to acquire higher education but are unable to do so owing to lack of
resource or paucity of time. Ellison (2000) states that "distance learning" and "distance education" have been applied interchangeably by nearly everyone in a variety of institutions, academic units, government agencies and the media. It is defined differently depending on who delivers the content, creates or develops the technology and system used to transmit learning to learners. In the simplest terms, distance learning is any method of organizing and delivering instruction that does not require the learner to be with or near the instructor. Therefore, delivery may be by paper and pencil, via the mail, listervs, radio, interactive video, television, web bulletin boards, or other delivery system on the drawing boards. Learners can be students in schools, college students, employees in business, librarians on the job, and so on, receiving distance learning instruction in real-time, such as television, radio, and interactive video or live online Internet instruction and are in synchronous educational learning environments. Those learners receiving instruction according to their own schedules are in asynchronous education learning or self paced environments. The learner in asynchronous environments does not have to be at any place at a particular time to receive instruction. Parameswari (2001) explains that extension education aims to extend, to spread or to disseminate useful information and ideas to rural people outside the regularly organised educational system. Extension simply put, refers to the mechanism, which facilitates the social use of knowledge, that is already acquired and researched. In other words, it forms a live contact between the knowledge sources (institutions) and the social situations
community) by way of addressing the problems and issues of the latter. Rausaria and Bharat Bhusan (2001) observe that DE is emerging as one of the effective modes for providing knowledge, skill, education and training to the learners even in remote and far flung areas. Application of ICT in providing flexible and cost effective programmes through distance mode for education and training is now widely recognized and appreciated. A unique feature of the distance mode is the use of media mix in the teaching learning process and student support services. The dual mode institution has also been realizing the importance and potentiality of distance education. Quality assurance is the key to success of DE. Gupta (2002) highlighted the characteristics of distance education courses apart from campus based courses in terms of management and administration. The physical and frequently temporal, separation of teachers and learners means that the relationship between the student and teacher needs to be managed in a different way, as does the relationship of the students to the institution, and to each other, Course materials, in whatever format, be it text, computer disk or CD-ROM, need to be written, designed and produced to deadlines. System has to be set up for stock control and delivery of materials to students. Distance learning courses require a significantly greater amount of administration than campus based courses and involve both academics and clerical staff in management. Nyondo (2002) explains that a learner support system has three subsystems in operation, namely; the administrative, the academic (pedagogical) and the socio subsystems. The administrative subsystem involves dealing with matters
such as early dispatch of materials and marked assignments, provision of times when tutors are available, telephone access, counselling and so on and so forth. The academic (pedagogical) subsystem involves support that is provided within materials or aspects of face to face teaching counselling (including electronic media). The socio subsystem involves matters that pertain to home and community environment such as access to libraries, availability of peers or family members who are able to assist in the studies. For the learner support system to be effective, all the three subsystems should operate efficiently. The three subsystems operate simultaneously and are not mutually exclusive or disjoint. Sharma, (2002) explains that web accessibility is an important factor for distance education students. Suitable knowledge on uses of technology to present distributed learning courses and ways to improve interaction with remote students, for instructors has been recommended. Timely reply to students’ email queries by the instructors helps students to complete the course in time. According to Shastree (2002) in the quest for new humanism and peace and in total integration of culture and technology a new stage has come in the evolution of education which is supposed to act as an agent of change in the development of individual personality, in assuring greater element of equity and access, transcending social, economic and geographical barriers and in the enhancement of knowledge and culture. This third stage of educational evolution, distance education symbolises the transformation of education from the stage of craft to technology, enduring it with high flexibility and vastly increased productivity, by
transporting knowledge to the people, the place of knowledge. Singh (2002) analysed that in a country like India with lot of diversity, different standards of education in terms of quality and duration, with vast population of learners, majority of them with limited resources, open learning has already emerged as a strong alternative in the field of education. It was considered that open learning system has a tremendous capacity to share the burden of conventional system of education. It was also expected that it will prove very useful for those who wish to pursue their education beyond conventional system. In this system of education distance mode has been adopted. The openness of the system refers to its flexibility or lack of restrictions. Philosophically, this system is against the restrictions in term of age in admission, attendance, examinations, course duration etc. In open learning, efforts have been made to negate and neutralise the restrictions of conventional systems. Singh and Kumar (2002) opine that DE has established its relevance and efficiency across the globe. Development and expansion of distance education/learning is a worldwide phenomenon. It is cost effective and provides with the benefits of large scale economy. DE is flexible in nature and is able to cater to the needs of innumerable that could not be blessed with the education provided in conventional temples of learning. Srivastava and Reddy (2002) analysed that twenty five years ago it was only a prophecy that the home would be the electronic cottage in the society in which paid work, education service consumption and leisure would be mediated through new technologies. What was then a prophecy is more than reality today. Rapid
development in technology, involving the convergence of telecommunication, computers and micro electronics, and the emergence of the internet have revolutionized both the speed and nature of communications. These new information and communication technologies, have not only facilitated the globalization of society and economy on the one hand, but have also made a major impact on education, particularly the distance education. In fact technology-mediated distance education came into existence 150 years ago, as an effort to replace live, face to face instruction. Ever since then distance education has evolved and taken on several distinctive forms that reflect the characteristics of different technologies. Essentially, distance education has evolved through generations: correspondence education, open and distance education and virtual education. Verma (2002) argued that DE can be structured to enhance interactive learning among student-student and student-Instructor in a way that it can equate or exceed the amount of interaction and a sense of co-learning that can be developed as in the case of traditional classroom learning. The concern of distance educators is to facilitate the learners by adopting multiple and flexible learning strategies to develop learning environment. E-mail contacts, toll free telephone facility to learners, chat rooms, Internet conferencing, and onsite interaction on site instruction are tools for that. Gaba and Bhushan (2004) opined that distance education has a vast potential for growth in a developing country like India. It is much more cost effective than formal system. DTIs (Distance teaching institutions) should provide some financial incentives to the poor students in terms of
fee concessions, scholarships etc. There is a need for raising the efficiency of the present organisational system for the improvement of the ODL programme. In this context, major emphasis is to be given on strengthening its financial position by raising the revenue through sources other than the students. Certainly, it would require a change in the central and state government's policy with regard to the financial management. Gnanam and Stella (2004) observe that the distinction between distance education and campus education is a myth, if one considers the convergence between the two already happening in the major universities. When technology is integrated into formal educational processes and used for the 'distributed education' for both on and off campus students, the distinction between them gets blurred. This appears to be the general intention of UGC in diverting enormous funds for ICT ultimately to promote distributed education in the traditional dual mode university. Hussain (2007) discussed that the concept of quality of life needs some conceptual analysis first in order to acknowledge the vast effect of changing global events in different walks of life. He added that the revolution in the field of information technology and mass media has brought marked changes in the life of individuals. Education must be interlinked with healthy values, proper utilization of human energy and a satisfying life and social well being. Let us make full utilization of knowledge management and mass media techniques in imparting open learning to the needy people. The aim is to make an unhappy person happy, happy to happier and happiest making them capable of enjoying quality of
life in this world of increased stress and tension and conflicts coming out of excessive competitiveness and expectations resulting in frustrations and aggressions. According to Kelly and Mills (2007) Open, distance and e-learning institutions of higher education often face ethical issues relating to their distinctive mission, especially where the core role is to open educational opportunities to under-represented groups while maintaining academic standards. Openness is surely a 'good thing'; and yet there are often tensions relating to government polices, recruitment, access to technology, curriculum, teaching and student support that sometimes involve uncomfortable trade-offs. Mishra (2007) indicated that distance education as a subject is only available at IGNOU, and no other Open University or distance education institute has the same to offer. Of course, one can take up a topic on distance education and do research in the discipline of education. This is happening in many universities in the country. A subject/discipline shall only grow; if we have more and younger persons involved in its teaching, learning and research. Pandit (2007) explained that ODL worldwide has been established as an effective and innovative alternate system of education meeting the ever growing demands in higher education in India. Learner friendly approaches in terms of access, prior knowledge, place and pace of study, instructional system responding to the learning styles of heterogeneous group of learners made ODL system popular and acceptable by the learners of 21st century. Rumble (2007) opined that in the 1960s and 1970s distance education was seen as a way of increasing access to education, and hence as
something the state should fund, libertarian thinking has weakened support for the
nation state as a provider of social welfare. He argues that libertarian policies are
vicious in their effects. By subscribing to such ideas we are culpable because we
could have done something to make bad lives better and we did not. Government
funding of distance education should be supported on the grounds that this is the
most efficient way of meeting the educational needs of those living bad lives. Verma
(2007) stated that distance education in the country got a big push during the
seventies, more and more universities took distance education as an alternative mode
of education and the educational administrators realized to make an experiment to
test the efficiency of the correspondence education system at post graduate level
thereby generating a path for state open university system in the country. The state
open university came into existence in response to social need for designing
innovative educational structures, which could overcome the limitations of the
conventional system of education. Open learning is a mode for the acquisition of
knowledge and skills through mediated information and instructions, encompassing
all technologies for learning anywhere at anytime. Open University System mainly
concentrates on non-conventional courses to meet the changing needs of the society.
Sharma and Chaudhary (2008) emphasized that there is no one meaning of the term
distance education. In India, we have been using three terms i.e. 'External
Appearance (Private appearance) Correspondence education and Distance education.
Further emerging trends in application and ICT etc describe DE is one of the most
rapidly growing education, and its potential impact on all education delivery system has been greatly accentuated through the development of Internet-based information technologies. Chatterjee (2009) discussed, why distance education is a necessity. One of the main objectives of distance education is to 'reach the un-reached and serve the unreserved' from a distance. To reach this target the educational institutions must use the best affordable technology. Starting from radio, TV, and computers, one can go for internet and other satellite based services to make best use of the high end or low technology to satisfy the learning needs of the learners residing in remote corners of the country. Distance education is cost effective for the institution and the learner as well. Due to its openness, flexibility, technology based approach; ODL system is gradually becoming popular as an alternative to the private institutes which extend educational facilities for affluent families of the country. One can consider ODL system as an emerging alternative to privatisation. Through ODL system it is possible to transfer quality education to a large section of people within a short span of time. Pani and others (2009) reflected that IGNOU is the largest Open University in the world with over 17 lakh students on rolls, 60 Regional Centres, 1900 study Centres and 50 overseas Centres. In addition, the IGNOU through Distance Education Council nurtures and monitors distance education in the whole country. IGNOU has successfully achieved benchmarks of quality in terms of print media, multi media and web media, student support service and need based courses. The size and variety of the Indian subcontinent automatically necessitates efforts beyond
IGNOU. The Kothari Commission recognized the importance of correspondence education as a second opportunity to learn. Further according to Pani and others, today there are 14 Open University including IGNOU and 130 dual mode conventional University. During the 10th plan the ODL system accounted for 20% enrollment in higher education. There are as many as 3.6 million students under ODL. The ODL scenario is not very different from the conventional scenario when contrasted with the developed countries. Indeed much higher number needs to be achieved in terms of enrollment. Besides quantity, quality is very important. Thus, at the national level ODL has to meet the challenges of access, inclusive growth, democratization, technology, appropriate technology, sustainable development, globalization and reforms etc. Richardson (2009) surveyed the experiences of students taking the same courses in humanities in distance learning they were compared when tutorial support was provided conventionally (using limited face to face sessions with some contact by telephone and e-mail) or online (using a combination of computer mediated conferencing and e-mail). The Course Experience Questionnaire and the Revised Approaches to studying Inventory were administered in a postal survey to 1264 students taking two different courses with the UK Open University. There were no significant differences between the students who received face to face tuition and those who received online tuition either in their perceptions of the academic quality of their courses or in the approaches to studying that they adopted on those courses. Provided that tutors and students receive
appropriate training and support, course designers in the humanities can be confident about introducing online forms of tutorial support in campus based or distance education.

2.2 DISTANCE LEARNERS

Gibson and others (1999) analysed that the delivery of higher and further education to students studying at a distance has extended from being perceived to be the sole concern of the open university to being seen as part of the core activity of many institutions. Student populations have dramatically increased and diversified in recent years; sub degree level courses and flexible structures of certification have become more common. Access to lifelong learning has increasingly been seen by policy makers at all levels as a social and economic priority. Within this changing educational environment, programmes of distance learning have been established as a means of including groups of learners unable or unwilling to participate as full time, on campus students. Moorty (2002) highlighted that learners with special needs, that is those with disabilities, require specialised treatment in so far as their education is concerned. The conventional educational system may or may not offer the kind of support that these learners are looking for. It is here that distance education can step in as a means for such learners. Disabled learners would require services of a different nature right from the pre-entry stage to completion of their program. Their needs must be responded to with sensitivity from course development up to course delivery. A sensitivity approach to such learners may
make all the difference between their remaining in the system, and dropping out of it.
Distance teaching university should respond to the needs of such learners who may have been left out of the mainstream. Ganesan (2006) emphasized that open and distance learning system is proud to have employed persons and adults as its distance learners (DLs). Having reached the right target population i.e. employed persons, housewives, persons belonging to wide age range - it poses special challenge to open and distance learning system managers to handle distance learners effectively and efficiently. One of the major objectives of Open and Distance learning system in our country is 'democratizing higher education and providing access to all segments of people. Wang (2008) studied and used adapted self assessment questionnaires to examine the relationships between the learning motivation, learning strategies, self efficacy attribution and learning result of 135 distance learners. The aim is to model the relationship between psychological characteristics and learning result of distance learners. The outcomes of the study show that a relationship exists between psychological characteristics and learning scores of distance learners. First there is a relationship between self efficacy learning strategies and learning results; second there is a relationship between self efficacy, internal attribution, learning motivation and learning result strategies are clearly associated with positive and predictable effects on learning result. The effect values are 0.76 and 0.63 respectively. Self-efficacy and internal attribution have indirectly positive predictable effects on learning result. The effect values are 0.48 and 0.21 respectively. Hart (2008) opined
that distance learning at the graduate law level offers exciting opportunities for non-traditional students to learn not only substantive law but also new skills. One of these skills should be information research.

2.3 LIS EDUCATION

Sugatri Devi (1996) traces the development of information revolution and discusses the need to develop manpower to manage its organization and servicing. This necessitates the need to develop library and information science education. She studied the various stages of LIS education development in India since 1911 and particularly after independence when LIS education was started at various levels to meet the need of different libraries. She further compares the syllabi of various institutions and method of imparting LIS education, brings out the differences in on campus and off campus institutions and suggests ways and means to improve the same. Burman (1997) stresses the importance of library education in organising library services. Emphasizing on need of professionally qualified library staff, he traces the history of manpower development in Assam vis-a-vis North East Region. Discusses the role of the Assam Library Association and gradual development of the Department of Library and Information Science at Gauhati University (GU). Describes the significant contribution made by the department in developing human resources in the region despite various obstacles. Critically analyses the present needs for manpower for library services and production thereof, stresses on the need
of constant revision of the syllabi to incorporate the latest development in the field. Lastly, suggests reduction in the intake capacity, introduction of two year integrated courses Leading to M. Sc. (Library and Information Science), starting of M. Phil. Programme and urges for improvement in infra-structural facilities for both teachers and the taught. Murthy (1997) covered areas which can be grouped into the broad disciplines of computers and communications covering the development and management of information systems like libraries, database and networks both online and off-line and reprography and mass communication covering the technologies used for presentation and dissemination of information. The paper briefly discusses the impact on and use of all these technologies in library and information science (LIS) education. Saxena and others (1997-98) traced growth and development of LIS education in India with special reference to Uttar Pradesh. Further, the problems of LIS education in India have been explained such as outdated curriculum, no uniformity in syllabus in the country etc. Jeevan (1999) argued that more and more universities have ventured into offering library courses on the distance mode, without any major increase in the demand for library professionals in the Indian job market. A comparison of the library professional with an engineering professional is explored to arrive at the facts. Since accurate data about the number of library jobs is not available, two models were constructed to justify that the demand on library jobs is fully satisfied by the regular courses. The aspiration of working graduates of libraries to become professionally competent can be satisfied by resorting to an
"accommodative" attitude by library schools. The challenges posed by the unchecked growth on distance education can be tackled only by the formation of a library education council (LEC) with support by the professionals, administrators and professional organisation. Mahmood (1999) described the library and information science education through the distance teaching system offered by Allama Iqbal Open University in Pakistan. The only Open University in the country has offered Certificate and Bachelor's programmes in the subject since 1988 and is planning to offer Master's and some other advanced programmes in the future. He presents a brief history of the University and the establishment of the Department of Library and Information Science. Syllabi and objectives of various LIS courses are provided. The system of education, including admission, study materials regional services tutors, study centers, assignments and examination is also described. Enrolment data up to spring 1996 are analyzed (by area and gender) with opinions of senior library professionals in the country about these LIS courses. Tadasad and Maheswarappa (2000) highlight the role of instruction in LIS education. They discussed briefly the LIS education in India with regard to level of courses, medium of instruction, library infrastructure, book production, job opportunities and employers expectations. Also discuss activities to be performed; attitudes, skills and knowledge required by LIS professionals and course requirements. Identifies and discusses the issues such as availability of expertise curriculum availability of course materials, background of students seeking library and information science education, marketability of LIS
graduates and postgraduates, national integrity, trends in LIS education at international level and global village concept and their implications, and LIS education in Indian regional languages. Concludes that the imparting of LIS education in regional languages may impede the very philosophy of library and information science. The ideal in this respect would be single international language, English and surely not many regional languages. Marcella and Baxter (2001) provide a critical overview of the introduction of the Postgraduate Diploma/Master of Science course in Information and Library Studies, in online distance learning mode, by the School of Information and Media at the Robert University in Aberdeen. Includes some initial observations on the success of the distance learning approach and on the implications of directing, and interacting with, students by remote, largely electronic means. Student response to the course materials and to the communications media utilized are discussed critically, in particular, in terms of interaction, involvement and isolation. Also examines the nature of the status and personal circumstances of the students being attracted by the distance learning mode. According to Mahajan (2002) continuing education refers to that part of education, which takes place after the conclusion of initial or basic (elementary) education. The term is more particularly applied to courses other than full time and vocational and recurrent professional training are all commonly provided for under the label of all continuing education. Open Universities can play a vital role in continuing education. Minishi (2003) explained that ICTs have become basic ingredients of, and
competitive tools in, the information-intensive tertiary higher education sector. Their increased and specialized use in teaching and learning, research, academic administration, institutional management and information provision translates into greater access to higher education, flexible and innovative delivery at reduced educational costs, more efficient provision of information services and enhanced educational outcomes. In LIS education, ICTs can represent both the content of courses and essential tools for effective learning of the content. The constant rapid development of these technologies means that LIS curriculum structures and content have to be re-organised, infusing greater ICT knowledge and skills into courses and providing more hands-on practice. Africa LIS educators recognize the importance of intensifying information technology courses in their curricula to be relevant, visible and competitive in an increasingly globalized and networked world. However, they are often challenged by factors such as technological capacity, funding and sustainability of resources, human expertise and the attitude of trainers/trainees, higher education bureaucracy and a complicated employment market. Collaborative initiatives and approaches in the implementation of ICT projects are particularly significant because networking, which is the backbone for effective harnessing of ICTs, often transcends departmental, institutional and national jurisdictions. Minishi-Manjanja and Ocholla (2003) explained that ICTs have become central to education and training in library and information science/service (LIS) because of the great influence of these technologies on the professional world. Their study on Kenya is
part of a larger doctoral research project that aims to map and audit the types, nature and diffusion of ICTs in LIS education and training programmes in Africa. The findings indicate that all LIS schools in Kenya have embraced the use of ICTs, but there are major variations in terms of application. All but one LIS school offers a wide range of relevant ICT courses, many of them as core modules. However not all of them offer, or are able to offer, practical hands-on experience for their students. In teaching and learning, only a few LIS schools use ICTs to deliver lecture, the majority still favouring age-old method of face to face classroom teaching. In research, the lack of ICT facilities has resulted in partial and minimal use of ICTs, especially since academic staff have to pay (individually, from private funds) to access the Internet. For the same reasons electronic publishing of research results on the Internet is low. In terms of academic administration, most LIS schools have computerised but most activities still are conducted offline due to networking inadequacies. The study recommends that Kenyan LIS schools should increase the use of ICTs in teaching and learning to foster greater effectiveness. Kenyan LIS schools should strive to retrieve - to provide online and distance education in order to open more learning opportunities for the nation. Singh (2003) traces the emergence of LIS education in India before and after independence. Describes the current status, different patterns and levels of LIS education, as well as the research programmes, being offered by various universities. Provides an overview of the institutions, offering LIS courses at various levels through regular and distance mode.
Emphasizes the need for having a national level accreditation body, to maintain uniformity and standards in LIS education. Discusses the problems affecting the status of LIS education and suggests ways to solve these problems and the approaches to prepare the LIS professionals to face the growing challenges of the job market. Brown-Syed and others (2005) described that the web would be ideally suited to LIS programs, whose students are often employed full-time and located at a considerable distance from the campus. However, the web presents a series of conundrums for educators who are concerned with learning style sensitive instruction. The web may present problems for sequential and aural learners. In a lecture situation student must attend to and assess the message of one person, the instructor. Distance learning formats, such as discussion boards and chat sessions, place more emphasis on student participation, which increases the time burden necessary to interact effectively. Bhatti and Arif (2006) argued distance education had a unique role to play in Pakistan, where high university drop-out rates in conventional higher education, the need for outreach to the remote, rural poor, and the social barriers placed between women and participation in traditional education are notable features of social and educational life. Kawatra and Singh (2006) trace the history of e-learning to the learning age where knowledge will be freely accessed, profoundly abundant, and offered in cornucopia of formats. Distance learning has been accepted and recognized as mode of education in LIS. The concept of open and distance learning is discussed. In the changing scenario of the society,
the skills required of LIS professionals on identified. They also examine the impact of the internet on the teacher’s role and explore the types of skills and strategies that the teachers will need to be effective and efficient in online learning environment. They provide an insight into the innovative multi channel delivery modes adopted by the different universities and their effectiveness for the LIS distance learners. Guidelines for distance learning library services approved by Association of College and Research Libraries on June 29, 2004 are also discussed. For assessment and accreditation of LIS distance education institutions in India, areas have been identified. Mahapatra (2006) explained libraries all over the world are moving beyond the conventional framework and giving the footprints of radical changes in the skeletal concept of LIS profession. The librarians of 21st century have to prepare themselves suitable for working in network environment and should also acquire necessary skills such as leadership; exploiting information handling; communication, crisis management, team building and decision making, etc. So, the library professionals are in dire need to acquire the relevant skills and expertise to track the world of information and become competent enough to serve in a digital culture. It attempts to project issues related to the LIS education in India and suggest some proposals in this respect based on routine features and experiences. The study also proposes the core elements of LIS education curriculum and the vision of LIS education in India for coming decade. The paper also stresses the needs of revised course contents and allied challenges for readiness of Indian LIS education in digital
era. Asundi and Karsiddappa (2007) present a succinct profile and contributions of Indian LIS education since its inception. It also attempts to bring to the fore how this profile presents its international potentiality and perspective scenario in the context of developing countries. Johnson (2007) introduces the special issue on education for library and information science in developing countries. It reviews past articles that appeared in the International Information and Library Review on LIS education in developing countries. Previous articles reveal that this topic has been of interest to readers and contribution to the journal, since its beginning. Some issues have remained constant throughout the history of the journal, for instance, the relevance of LIS curriculum to developing countries, dependence on Western education models, lack of respect for the profession and need to upgrade the skills of librarians and other information professionals to address the challenges of the information society. They focus on the need for LIS education to prepare graduates to become more involved in the economic and social development of their countries. Kazmer (2007) described that most of the librarians earn master's degrees online, it is important to understand how their educational experiences affect their professional practice. A crucial aspect of online learning is the residency: the time distance learners spend on campus, bonding together and with their educational institutions. Residencies are not practical or preferable for everyone. Some library practitioners would find it difficult to serve their constituents consistently if they left their posts for even brief residencies. Comparing students experiences in two online LIS programs, one with
and one without a residency requirement, provides insights into the differences between them. Students in the program without a residency had less sense of community, found group work less successful, and built fewer friendships among their student colleagues; they built professional and support network among local professional colleagues. Programs without a residency offer benefits for students and communities, for example, by providing the only means of professional educational for paraprofessionals in underserved communities. Krishan Kumar and Sharma (2007) explained that LIS schools need to strive hard for their successful existence for which they require to give serious thoughts and do necessary changes in their LIS curriculum especially incorporating adequate ICT components. ICT has made a big impact on teaching and learning, leading to a multi format learning environment. Keeping in view the impact they discussed the need for e-mode student centred education for LIS professionals and throw light on some of the e-learning centred education models for LIS education. Ramesha and Ramesh (2007) described that the technological revolution paved the challenges for the library and information science (LIS) schools not only in India but also in the west. Responsibilities of LIS departments and teachers are increasing to produce best LIS professionals to lead the 21st century librarianship. The major responsibility of the LIS departments in India is to groom LIS students in the philosophy, knowledge, and professional values of librarianship as practiced in libraries and in other contexts, and as guided by the vision of the 21st century librarianship. LIS education and training facilities in India
are undergoing rapid changes. During the past 10 years, the number of library schools/departments has grown substantially, both for regular and distance education programmes. Reorientation has been common in most LIS departments and review and revision in curriculum has also been noticed. The quality of LIS educators has also improved and research output is experiencing new dimensions. Increase in the use and access to ICT for LIS education is now more evident. The paper discusses the challenges LIS education faces in the 21st century and how to make it more relevant and effective. Varalakshmi (2007) stakes that library and information science education in India is nearing to celebrate centenary celebrations. However, several issues need to be resolved to meet the demands of the contemporary information society. The paper reviews the growth of LIS education in India, foresees the future trends and suggests for national consensus on some of the basic issues. Yusuf (2007) highlights importance of library and information science (LIS) education in UP. It assesses status of LIS education with the help of various indicators, i.e., growth of university/LIS schools, status of universities level courses, mode of education and location of library schools of the state. The paper also finds out variations/discrepancies and suggests several measures for scientific growth and development of LIS education in the state. Sharma and others (2010) described the LIS education online in IGNOU. They opine that correspondence education gave birth to distance education in the process of evolution. It is interactive in nature. They indicated that IGNOU is conducting 18 online programmes in different areas.
The MLIS online programmes is completely online, right from registration to certification. It is started on pilot basis at the platform library and information virtual education (LIVE). The details of the programmes like courses etc. have also been discussed. Further, it is need of the hour because Librarians have always been in the forefront to embrace technology. They automate their wares, have been digitizing their sources, and are also providing networked based services. This should hold true for online education as well. Online education opens up opportunity for keeping abreast of knowledge and technology through continuing education programmes at one’s own pace and time. If appropriately planned online education to some extent can help in upgrading the skills and knowledge of library and information science professionals. The challenge lies in adopting and adapting this new form of learning and promoting to the maximum extent possible.

2.4 ICT AND DISTANCE EDUCATION

Raymond III (2000) explained that recent developments in technology have provided educators with an extremely wide variety of electronic tools to assist them in achieving one of their primary objectives - the transmission of knowledge to others. One of the most important uses of these technologies in higher education has been their employment for the delivery of distance education. Further describes the types of technology available for the delivery of distance education (computer-assisted education system, audio/video mediated education systems and computer-mediated education system), and has documented the effectiveness of these tools. It
also discusses the successful experience of the school that pioneered the use of technology to deliver at a distance in the discipline of social work. Garg and Panda (2001) emphasized that with the advent of ICT in 21st century, growth in the delivery of education has made a remarkable and tremendous place. In fact, these forced a sure, though silent, transformation; the ivory towers were gradually thrown open, and education changed from art to craft with unlimited possibilities and immense potential for everyone. The ICT in education ushered in the third stage of educational technology development. The teacher and learner gained access to a wide range of media, print, radio, TV, audio-video, audio-video conferencing and tools-computers, CD-ROMS, e-mails, internet, that enhanced the reach of the word of the mouth to such an extent that education at a distance became an enriching experience. IGNOU experiences in the first launch through Internet mode like Certificate in Computing, Bachelor of Computer Application and Master of Computer Application have also been explained. Mishra (2001) indicated that the television is one of the most effective and useful mass media for dissemination of educational programmes because it is capable to show the actual sequences of events and places. It helps us to bring the outside world into the classroom. To ensure the maximum use of the medium of television for educational purposes, the Prasar Bharti started Gyan Darshan channel which is fully devoted to educational programmes. Walia (2001) explained that IRC is a relatively new concept in India. Interactivity provides opportunity for a two way communication thus enriching the
pedagogic transaction. IGNOU offered this mode to bridge the gap between the 'learner and the educational provider' this interpersonal communication is in addition to the existing modes of interaction i.e. face to face counselling, PCPs, assignments etc. IRC is a very important aspect of an open university as it facilitates online teaching by academics. It is intellectually challenging for the experts. The excitement communicates itself to the students also through the radio. The pattern of IRC Kota Open University has also been discussed. Besides that, analysis of learners’ responses to IRC of Kota Open University has been indicated. Joshi and Pant (2002) concluded that radio has been used for a long time now as a potential medium for the realisation of certain educational objectives. As an educational medium it has the advantage over other media of being more accessible. Being a rural medium it requires no reading and writing skills on the part of the learners. However to increase the learner's concentration span and interest, the technical and academic expertise should be well coordinated during radio programme production. Considering the potential of India's economic, and demographic constraints, radio as an educational medium should be exploited by making it interactive, flexible and relevant to the pedagogical requirements of the distance learners. Sharma (2002) explained that IGNOU uses a multimedia approach comprising of printed material, audio and video cassettes, internet based delivery, telecounselling, laboratory training, subject specific academic counselling by academic counsellors, submission of assignment responses for tutors comments and grading etc to reach out to the learners. IRC has
also been adapted to its student support services. Radio has been used in education being considered as most accessible technology in terms of cost and comprehension. Many distance teaching universities e.g. Britain, Indonesia, Spain and Thailand have been using radio for their distance education courses. IRC of IGNOU was started on an experimental basis as a sponsored programme in May 1998 from All India Radio station in Bhopal. Now IGNOU IRC, one of the noble techniques utilized to reach out to the learners, is really an appreciable activity. Krishnan (2002) argued that the concept of learning will be intricately related to the demands of true knowledge and demonstrable skills. Further the innovations in distance education system which are currently taking place could provide valuable assistance to conventional forms of teaching starting from the earlier forms of correspondence courses relying upon postal delivery, contact classes and supplemented by radio and television and study centres, the emerging innovations offer convenient facilities for virtual classroom, networked learning, online in real time and deferred time multi-instructional registration and cross disciplinary learning have become feasible. Besides that importance of ICT felt as it offers unlimited scope of promoting effective interactivity and interactivity is an integral part of learning. Gupta and Panda (2002) elaborate that the emergence of open and distance education is probably the most important development in the field of education in recent times. This is in spite of the fact that not too long ago, the purists in the academia treated distance education with contempt, the poor cousin of face to face education. However, now conventional
higher education is mired by access, equity and cost; and on the other hand, the phenomenal growth of ICT and their significant use in the field of education has led to the possible realisation of 'education for all' and lifelong learning'. Now it is possible to impart uniform and high quality education (even in highly skilled areas) to the disadvantaged people living in geographical, socio-economic, and gender 'Isolation' for centuries. Rao and others (2002) explained that very few universities provide distance education in science and engineering related disciplines. The main reason for this is that most of these subjects require an associated laboratory where the students have to perform experiments to understand the subject. Without laboratories it is unimaginable to think any engineering curriculum. Providing access to engineering laboratories in the distance education is difficult as well as expensive. However, modern technology has compensated this aspect to some extent by development of e-laboratories. An e-laboratory gives option to the learner to simulate different types of conditions, as many times as he wants while conducting an experiment. Experiments which may not be possible otherwise in real life situation are also possible virtually through these laboratories so they are called virtual laboratories also. Learner can give different inputs and see the effects while running an e-laboratory for example in case of robots if the effects of wrong movements of robots are to be seen, it is not possible in real laboratories but through virtual laboratories effect of hindrances can be easily understood. So from this point of view virtual laboratories, which are easy to understand and perform, are useful.
Wools and others (2002) explained the beginning with interactive television transmission (ITT) to an offsite campus at CSU Fullerton, the School of Library and Information Science (SLIS) at San Jon State University (SJSU) has been providing distance education to students in California for more than ten years. While ITT continues to be employed at SLIS, faculty members are moving into Web-assisted and Web-based courses in the Master of Library and Information Science degree program. They provide background information, the current program, and compares research conducted elsewhere with research undertaken at SJSU. Martey (2004) described the ICT scene in Ghana from 1996 to 2004. The emphasis is on the benefits that distance learners in Ghana will derive from an ICT-enhanced distance education. They also draw attention to the efforts made by various governments of Ghana and some agencies to solve the major problems facing ICT-driven distance education in Ghana. The attention of distance education providers are made aware of the minor but disruptive operational hindrances to the use of ICT. Suggestions are made as to how academic libraries in Ghana can assist distance learners now. Osborne and Oberski (2004) described that continuing policy initiatives at both national and european levels emphasizes the need to increase participation in higher education through more flexible delivery. One of the key elements of flexible delivery is seen to be the use of communication and information technologies (C&IT). These technologies clearly have the potential to reach a much wider student body, irrespective geographical and or social limitations. One can briefly explore the
role of C&IT in university and argue that its use is far less ubiquitous than predicted. Then it can explore the impact of C&IT on pedagogy in higher education as well as on the organisation of teaching and learning, with a particular emphasis on delivery to small companies. The current use of C&IT in higher education is likely to continue to confirm the already existing gap between those with and those without access to these technologies and predict that the role of multinational corporations in education is likely to increase. Symth (2005) outlined in his paper the possibilities for using broadband videoconferencing within the larger context of changing the focus for teaching from the teacher to the learners. It also explores opportunities that might be created by this technology to facilitate learner-centred engagement in learning and to provide new opportunities for collaboration and support for students studying in the distance mode. As part of the wider discussion, it presents a decision-making framework for teachers to consider when integrating videoconferencing into their curriculum. The bandwidth possible from broadband internet connection, rather than the richness of videoconferencing to a much closer approximation of natural communication, thus creating opportunities for more creative uses of the medium. The outcomes of trials undertaken at the University of New England during last two years provide the basis for predicting the usefulness of the technology for learner-centered interactions when the majority of students are learning from locations quite remote from the main campus. Khare and Saxena (2006) said it goes without saying that the "students" are the core of all educational activities. Not only in Open and
distance learning system (ODLS) but also in any conventional academic institution, the activities and system are developed with the ultimate objective to support learners. However, in the present scenario, the learner in ODLS desperately demands more and more interaction not only with the teachers/ counsellors but also with the institutions providing education. Thus, institutions concentrate on interactivity as an essential component in education to eliminate elements of isolation and misinformation by not only integrating/involving the learners but also by analysing the existing information database, learner's feedback database and support database. 

Potter (2006) conducted a case study of the development of the Open Learning System Education Trust's "English in Action” programme in South Africa from 1993 to the end of 2004. It describes the programme's development from a modal focused on enhancing learner involvement and learner gains to a modal of distance education and open leaning focused on promoting teachers and learners gains through school, classroom, and teacher support, and through in-service teachers training. It documents the expansion of schools, teachers and learners involved in the programme over a 12-years period. It also points out the implications and limitations of the use of radio to enhance teacher and learner involvement in open learning, in terms of the renewed interest in radio learning which has taken place over recent years in developing countries, as well as more broadly internationally. Rao (2006) defined distance education as educational or learning process or system in that the teacher and instructor are separated geographically or in time from his or her
students; or in that students are separated from other students or educational resources; the learning is affected through the implementation of information and communication technologies to connect teachers and student in either real or delayed time or on need basis; and the content delivery may be achieved by integrating various technologies, including audio, video, computer, internet, multimedia, satellites, TV, cable TV, interactive video, electronic transmissions via telephone lines postal service, etc. Bhattacharya and Sharma (2007) explained that models of e-learning that exclude any face to face contact may have limited prospect, but blended learning offers significant potential both on and off campus and should be pursued if the benefits of e-learning are to be fully realized. Kim and Zhang (2007) examine whether learners’ gender matters in computer mediated communication based distance education and if so what efforts can be considered to better meet the needs of learners. The examination is based upon an extant literature review and indicators that the traditional biases against women in education are reflected in and generally pertain to computer mediated communication based distance education. It also indicates that many of the underlying humanistic, behavioural, more cognitive complex learning theories which stress the male learning style are heavily present in current computer mediated communication based distance education. The research suggests that although computer mediated communication based distance learning may be a useful means for supporting learners who otherwise might not be served, there is need for higher education providers to put effort for the use of adult learning
theories that are not only effective for computer mediated communication based
distance learning, but also equitable for both female and male distance learners. Lee
and Chan (2007) open with a discussion of how and why mobile learning (m-
learning) is purported to be the next step in the evolution of distance education,
before looking at various perspectives on what m-learning constitutes. It critically
examines the degree to which true m-learning has been achieved, by offering
pedagogical value beyond the mere use of mobile devices to deliver e-learning
content. They argue that pod casting in combination with a variety of portable
MPEG Layer 3 (MP3)-capable devices that are increasingly ubiquitous, can be used
to deliver a form of m-learning that offers a higher degree of lifestyle integration
than many current 'state of the art' m-learning applications, despite not being as
technically complex. They present an example of a study in which pod casting was
used to deliver supplementary listening material to distance learners undertaking an
information technology subject. An end of semester survey yielded extremely
positive feedback about uptake levels and the perceived effectiveness of pod cast in
aiding the students' learning of the subject matter. However, it also produced
interesting results on the ways the students made use of the pod cast, which deviated
from the 'researchers' originally intentions for anytime anywhere any device
learning. The result is discussed in the light of possible influencing factors,
supported by follow-up interview data. The study may have broader implications for
the still nascent field of m-learning. Koovakkai and Menakath (2007) explained that
the learning society demands; fast, flexible and need based education with application of Information Communication Technologies (ICTs). The IT revolution has already revolutionized the teaching/learning process. The inception of EDUSAT is a great leap forward in the teaching and learning activities of the civilized society. EDUSAT is the first exclusive satellite for serving the educational sector. It is specially configured to meet the growing demand for an interactive satellite based distance education system for the country through audiovisual medium, employing Direct to Home (DTH) quality broadcast. EDUSAT was launched by Indian Space Research Organization (ISRO) on 20th September 2004. EDUSAT aims at establishing the connectivity between urban educational institution with adequate infrastructure imparting quality education to the large number of rural and semi urban educational institutions that lack the necessary infrastructure. Lee (2007) explained that many universities in the UK have recently started offering their staff and students free wireless Internet access through Wireless Local Area Network (WLAN) technologies, such as Wi-Fi based on a small empirical study of WLAN, development in a university setting. They explore adoption processes of the new technology by both the organisation and individuals, and consider factors behind the decision to offer wireless and how students as well as teachers appear to have responded so far. Despite technologists, enthusiasm for the new learning opportunities created by the technology, wireless availability does not appear to result in, or be linked to, a coherent m-learning strategy. Furthermore, the findings
suggest that too little attention has paid to understanding students social contexts of use and attitudes towards the technology, which are seen as pivotal to the development of wireless pedagogical uses. Librero and others (2007) are argued that the cell phone now most widely used medium in Asia, has major educational implications. Most users, however, do not realize the cell phone's potential for education, nor even for the communication functions for which it was originally designed. Most educators still see the computer and the cell phone as unrelated devices, and the tiny cell phone more as a personal accessory, especially for young people. With falling prices and increasing functionality, however it is virtually certain that not too far in the future all of the world's students will have a cell phone. This insufficient reason and motivation for educators to explore the possibility of making the cell phone an important tool in the educational system of developed and developing countries. They describe the experience of two major projects that are studying the potential of cell phone and short message service techniques for formal and non formal education in the Philippines and Mongolia. The studies have yielded positive reactions from students and trainees about the potential of these techniques, and are suggesting design and logistical principles for use in educational cell phone implementation. Misra (2007) accepted that the field of education through technology is a vast one with subtle distinctions its various branches. Distance learning incorporates all forms of instructions in which the instructor and the student are physically removed from one another by time or space from traditional
correspondence courses to web based instruction. Electronic Learning or e-learning incorporates all forms of online instruction using personal computers. M-learning is the follow up E-learning which for its part originates from D-learning (Distance learning). The term 'M-learning' has emerged to be associated with the use of mobile technology in education. Mobile learning, simply, means "learning on the move". In other words, the new term simply attempts to differentiate between learning that takes place in formal context such as a classroom. In this, the learning process takes place any time, anywhere while we are moving in our environment. Mohanasundaram and Jebaraj (2007) stressed that the use of mobile technology in education is known as mobile education or m-education. It may be defined as "any service or facility that supplies a learner with information, educational content through mobile phones that aids in acquisition of knowledge, skills and culture regardless of location and time". It will extend the desktop based online learning environment to mobile and will make the education to take place anytime and anywhere. Naidoo and Potter (2007) opined that equal access to quality education forms a central principle in the South African constitution. After South Africa’s first democratic elections in 1994, the prevailing situation in many under-resourced schools was a lack of access to quality education. They outlined ethical issues in the decision to use radio to advance access and educational development, including working at scale with large numbers of teachers, learners and schools and managing donor requirements for evaluation while using available funding for the greatest
effect upon the greatest number of learners. Ngwo (2007) indicated that the concept of distance education or learning is not new but welcoming in Cameroon especially with the advances in information and communication technology as the synergy for sourcing it. Information as the lifeblood of organisations is knowledge, intelligence or education while information technology is essentially the computerized or electronic technology as opposed to communication, which is thought of in terms of media or skills of and organisation of communication. Both information and communication technology however, facilitate the feasibility of distance education or learning. This paper, therefore aims at examining distance education, the role of information and communication technology as synergy for sourcing distance learning; the modes of delivering the curricula, which include; the face to face contact; electronic print media; library and Internet, and the implications for Cameroon/education. Finally, he ends up with conclusion and some recommendations made that if not all the modes, the print media should be used to facilitate distance education or learning in Cameroon. Passi and Mishra (2007) explained that Radio has been extensively used as an educational medium in many developing countries including India. Sometimes the radio may be overshadowed by comparatively expensive media such as television and computer. Still the radio remains the most effective medium capable of reaching a wide and geographically scattered audience at a minimal cost with proven educational quality. Today, AIR has 215 stations and 337 transmitters. Its coverage is as high as 91.42% of the area
99.13% of the population. Published reports confirm that it has supported educational programs in a wide range of subject areas. The potential users of educational radio increased manifold after the launch of Gyan Vani the educational FM channel for students of both open and conventional education. Each Gyan Vani station has a range of about 60kms and covers an entire city/town and the adjoining rural areas. Now, the Consortium for Educational Communication through its seventeen Educational Multimedia Research Centres (EMMRC) acted as broadcasting stations for developing as well as broadcasting Gyan Vani programmes. Thomas (2007) evaluated that with the expansion in quality of full-text content material made available through online database subscriptions, aggregator services, and over the Internet, the need for print materials seems to have diminished over recent years. Growing, too, are the numbers of students taking advantage of distance learning opportunities, scattered miles and even time zones away from the sponsoring library. Print format is not going away, though, and in order to serve effectively the distance user who happens to need the material, special considerations should be made. A comparison of selected ASERL libraries' with distance education information pages was made and the best practices for getting the materials to them in a cost effective, efficient, and convenient manner are presented. Vishtak (2007) says that traditional forms of instruction are not very much oriented toward the use of today's new information technologies and means of communication, even though the rapid development of computer technology and business machinery makes it
possible to make use of their advantages in the educational process in all kinds of ways. Thanks to these things, every individual can start, stop and restart the learning process at any time that is convenient. The technology of distance education is defined as a system of methods, specific tools and forms by means of which the content of the education is transmitted and the goal directed implementation of the aggregate set of pedagogical procedures which regulate the activity of the students. The structure and development of that activity, is effectuated. Homit and Berge (2008) examined e-mentoring as a way to sustain distance training and education, further described a framework for sustaining distance training and education by adding e-mentoring (over the Internet). It also explores the role of mentors, the benefits of the progresses to the mentor and the sponsoring organisations and ways of overcoming challenges faced by e-mentoring in distance training and education. Finally, it shows a cost effective way to monitor and improve the effectiveness of training and education in the work place. Kirkwood and Price (2008) review the role of assessment in student learning and its relationship with the use of information and communication technologies (ICT). There is ample evidence of technology-led innovations failing to achieve the transformations expected by educators. We draw upon existing research to illustrate the links between aspects of students learning, assessment practices and the use of ICT. Assessment influences not only what parts of a course get studied, but also how those parts are studied. While the adoption of ICT does not, in itself, change student behaviours, appropriately designed assessment
that exploits the potential of ICT can change students' approaches to learning. We argue that ICT can enable important learning outcomes to be achieved, but these must be underpinned by an assessment strategy that clues to adopt a suitable approach to learning. Lori (2008) widely viewed as entertainment, online amateur videos also comprise a form of interpersonal communication. Further analysed communication about amimutation portal, an online website created by and for members of a subcultural group interested in a genre of animated videos termed amimutations. Conversations often cross from text to video and back, creating meaning that is lost if the videos are analysed solely as creative media productions.

Murahari and Vijaya Kumar (2008) analysed that distance education, an ugly duckling a few decades back, is a swan today. It has come to stay and is no more a step sister of formal education. It provides open access to higher education to all those disadvantage groups who could not or did not join the formal streams for various reasons. It aims to train people in various arts and crafts leading to the growth and development of the individual for the betterment of the society as a whole. The quality of distance education is now widely recognized in educational, commercial and political circles of the world. As many educational authorities and planning stalwarts could foresee the distance education, which is cost effective, has provided a viable alternative to labour intensive and expensive conventional education. Saw and others (2008) conducted a study on the interaction patterns of distance learners enrolled in the Mathematics and Physics of Universiti Sains
Malaysia in the videoconferencing learning environment (VCLC). Interaction patterns are analysed in six randomly chosen videoconferencing sessions within one academic year. The findings show there is more interaction in the graphics display mode than the wider display mode. The graphics display mode, which involves the simultaneous interaction of the teachers, students and course materials, shows greater student engagement in the VCLE. The focus on a three-component interaction in the distance learning differs from previous studies which looked at distinct types of two component interaction. The types of communicative interaction, in particular the explanatory and cognitive types which are dominant in the graphics display mode, are discussed within the construct of learning. The higher number of teacher initiated interactions may also imply that the teacher plays a crucial role in creating and maintaining a community of inquiry focused on exploring and developing content as well as giving feedback on concepts, ideas or solutions. Wood (2008) studied recent and emerging technologies offer many opportunities for exploration and learning. These technologies allow learners (of any age) to work with real data, use authentic scientific instrument, explore immersive simualtion and act as scientists. The capability soon to be available raise questions about the role of schools but do rely on directed learning traditionally supplied by teachers. The prevalence of new tools and data streams can transform society, not just kids, into a culture of learning. Wu and Choa (2008) develop an environment for mobile e-learning that includes an interactive course, virtual online labs, an interactive online test, and lab exercise
training platform on the forth generation mobile communication system. The Next Generation Learning Environment (NEGL) promotes the term "knowledge economy". Inter-networking has become one of the most popular technologies in mobile e-learning for the next generation communication environment. This system uses a variety of computer embedded devices to ubiquitously access multimedia information, such as smart phones and PDAs. The most important feature is greater available bandwidth. The learning mode in the future will be an international, immediate, virtual, and interactive classroom that enables learners to learn and interact. Yildiz (2008) explained the term interactive education indicates the meaning related with multidisciplinary aspect of distance education following contemporary means around a common basis with different functional requirement, his aim is to reflect the new techniques in education with the new methods and inventions. These methods are better supplied by interactivity. The integration of interactive facilities in the discipline of education with distance learning is not a new concept but on addition the usage of these methods on design issue is newly being adapted to design education. Here the general approach of this method and after the analysis of different samples, the advantages and disadvantages of these approaches are being identified. The method of this paper is to evaluate the related samples and then analyzing the main hypothesis. The main focus is to mention the formation processes of this education. Technological development in education should be filtered around the necessities of the design education and the structure of the system
could then be formed or renewed. The conclusion indicates that interactive methods of education in design issue is a meaning capturing not only technical and computational intelligence aspects but also aesthetical and artistic approaches coming together around the same purpose. Chu and Robey (2008) argued online learning application is typically introduced with expectations that they will be used to improve learning and work practice, yet they often fall short of expectation following implementation. Numerous empirical studies have reported unintended use of new IT application, providing initial support for practice-based research for viewing emergent changes in work practice. Human agency is a core concept in theories of practice, which seeks to explain how recurring patterns of action develop in social context such as a work setting. However, current applications of theories of practice do not provide satisfactory explanation for the reason underlying changes in work practice. In this study, we investigate changes in learning and work practice associated with the implementation of an online learning system and in a Taiwanese hospital. We apply a temporal theory of human agency that disaggregates agency into elements reflecting actors' orientation to the past, present, and future. We use this theory to address the following research question: why do learning and work practice changes following the implementation of online learning? The case study reveals that actors face pressures to respond to the attractions of new ways of learning while preserving traditional work practices. In addition, technological features and social structures constrain the exercise of human agency. As a result,
use of the online learning system declined in the period following implementation. Our analysis adds explanatory power to the practice by incorporating human agency, technological constraints and structural conditional that affect practice. According to Desai and others (2008) Internet is a new media for distance education that provides students with a low-cost, flexible option to expand into global market. By 2004 at least two million higher-education students in the U.S. were engaged in distance education utilizing various technologies that allow learners to take courses independent of time and location constraints. It is important to convey the principles and skills of distance learning instructors will be adequately prepared to perform and interact well with distance learners. As a result, little is known about the ways in which educators enhance their own instructional design performance over time. This study looks at distance education versus traditional learning. Matsuo and others (2008) explained that due to the opportunities provided by the Internet people are taking advantage of e-learning courses and during the last few years enormous research efforts have been dedicated to the development of e-learning systems. So far, many e-learning systems are proposed and used practically. However, in this system the e-learning completion rate is low. One of the reasons is the low study desire and motivation. Previously we implemented an e-learning system that is able to increase the learning efficiency by stimulating learner’s motivation. In this work, we designed and implemented new functions such as: interface changing function, new ranking function and learners learning situation checking function to improve
the system performance. Round and Rappaport (2008) examined the development of technology and online education had opened the door to creative use of new and existing teaching methodologies. They describe how they used problem based learning in an online course as a method for teaching clinical decision making to nurse practitioner students. The close match between problem based learning and the characteristics of adult learners and successful learners is outlined as support for use of this methodology. In addition, they describe the challenges, rewards, and lessons learned in this innovative approach to online education. Dale and Pymm (2009) elaborate that with the growing influence of social media on contemporary society, educators have to adapt to new ways of engaging students in the learning process. The use of i-Pod technologies, as part of this new breed of social media and associated gadgetry, offers fresh opportunities to enhance the student learning experience. As part of a research project entitled Podagogy at the University of Wolverhampton, three projects within the performing arts subjects were undertaken to explore the use of the i-Pod as learning technology. This work reports on a number of common themes that have emerged as a process of the research that has been undertaken. These themes offer educators an understanding of how the i-Pod can be used as a learning technology within their learning and teaching practices. Deshmukh and Deval (2009) In the present scenario, there has occurred a paradigm shift in education and learning. Education which got influenced by ICT, has given rise to a new concept of e-learning, a concept that was originated in the western
countries, but now going to become a part of daily work culture of under developed countries. E-learning, which is fully technology dependent, is moving at a rapid pace, and to remain a part of drama, it is a need of an hour, that we must think towards it seriously and do something good to implement it. IGNOU has introduced the digital learning environment which would provide walk in admission integrated multimedia courseware, online counselling and mentoring, 24X7 learners support, assignment management system, e-tutor based practical, group based online seminar and online term end examination. Gupta and Badhusha (2009) described distance learning and e-learning and argued that e-learning provides such a high level of interaction that the distance is necessarily smaller. Digital interactive television, video conferencing, audio conferencing, www/Internet, video/audio tapes, and CDROM all medium are used in learning. In the live course setting level of satisfaction is higher than distance education formats.

2.5 CASE STUDIES

Madhusudhan (1997) described that distance learning is a boon for the learners who have been deprived of educational opportunities due to various reasons. Though, the idea of distance learning is a noble one, as far as extension of professional programmes and training are concerned. Its effectiveness or quality may be questionable primarily because, of the very nature of these disciplines (i.e., the professional subjects). The perceived problems of the programmes are marketability of products turned out and opportunities available to make a career in the library and
information science. The study assesses the prospects of distance learning in library and information science offered by distance education programmes in general and the programmes offered by the school of Distance Learning and Continuing Education (SDLCE), Kakatiya University (KU) Warangal, in particular, for their improvement. The study covers the prospects of both Bachelor of Library and Information Science (BLISc) and Certificate in Library and information science (CLISc) offered by SDLCE, KU. It also deals with the prospects and career of the students through the aspects of enrollment, academic achievement or success, failure, drop outs, employment opportunities and career advancement etc. The primary sources of data viz. the records of the SDLCE and examination branch of KU were used/consulted. A brief survey was conducted to find out the employment status and career advancement aspects. From the data collected, the study draws certain inferences and suggests necessary steps for improvement of the distance education programmes. It concludes with the changing social environment needs and changing methods and modes of education. Karim et al (2001) conducted a study on the use of radio and TV programmes of Bangla Desh Open University by its students. The results show that the programmes are popular and found useful by the learners. They feel it would be better if the programmes are broadcast after 10 p.m. so that they can listen in their free time. Also that the programme should conclude with the announcement of the topic of the next programme. Similarly they prefer TV programmes to be telecasted on Fridays between 9-11p.m. They would also prefer to
be done as if it is a classroom interaction. Continuous lecture by a single presenter makes the programme boring. Mishra and Gaba (2001) studied the use of activities in Self Learning Instructional Material (SLIM) by the distance learners. They studied a sample of the students of Foundation Course in Science and Technology (FST) of IGNOU. Activities have been defined as “things that can be used to ask the learners to do and involve in active learning, apart from reading of self learning materials and watching of listening to audio-video programmes. These are questions or tasks designed to apply learning to do practical problems”(IGNOU, 1997; p. 8-9) e.g. Self-Assessment Questions (SAQs), Unit end exercises, etc. The study revealed that the majority of the learners studied for gaining knowledge and insight. They are satisfied with the SAQs given in the text; in fact they would like these to be increased to cover the entire topic thoroughly. Sukumar (2001) conducted a survey of the use of IGNOU IRC. The sample population that was surveyed included the students of IGNOU in the Cochin Regional Centre and the general public in the different districts of Kerala under the Cochin Regional Centre. It is interesting to know that 34% of the students and 18% of the public listen to the programmes regularly. Added to it most of them participated for serious consultation rather than casual listening. The participants were happy with the telecast days i.e. Sundays. They would prefer the programmes to be sequentially arranged topic wise. They also want the topic to be presented as a panel discussion rather than as a lecture. The popularity of the programme is supported by the fact that 115 calls were made by the IGNOU students
and 141 by the public during a period of three months. Gaba (2002) indicated that
distance education system in India has expanded horizontally and vertically in the
last couple of years. But this expansion is not sufficient until the structure and pattern
of this system serve the community: Demand for skilled labour has risen
significantly as a result of globalization and changes in technology and the
organisational structure. The new information technology, by reducing the cost and
increasing the speed of communication, has been a major factor in globalizing and
integrating financial markets. A country's economic performance depends critically
on its access to and the adoption of new technology and labour force skills.
Therefore, the process of skill development in the informal sector in developing
countries like India is very important for the economic growth of the country. A case
study of IGNOU graduates conducted initially the status of IGNOU graduates at the
pre graduation stage was analysed in which it was found that among 416
respondents, (56.9%) were on the job, 12.9% were unemployed, 13.7% were
students of 10+2 programmes, 9.8% were doing part time job and 6.7% were self-
employed. Weerasekera (2002) studied the main policy of admission to the Open
university of Srilanka (OUSL). There is open entry with relevant occupational
background. There is no minimum educational level requirement for admission.
Hence, the students come from wide and varied backgrounds. Hence, the students at
the admission level are of different educational and vocational levels. Within two
years (foundation 1 and 2) the students are brought to a common platform. Since the
university is partly self funded and depend on the student fees, demanding for higher educational standards at enrolments level will reduce the income and will have impact on financial position of the university. The OUSL students are mature and older employed, most of the students are married and maintaining families (greater family responsibilities compared to conventional university students). The usefulness of SLIM was tested in a study by Rastogi and Sahare (2003) in an experimental study comparing the two strategies i.e, Traditional Classroom Teaching (TCR) and the Self Instructional Material (SIM). It was carried for B.Ed students to test their learning of Educational Statistics. Two identical groups were formed on the basis of their IQ and performance in Class X. One group received instruction in the TCR mode and the other in SIM mode. The results show that the knowledge of both the groups was enhanced after the course but the retention of the group receiving instruction in SIM mode was higher than the TCR group students. The researchers also observed that the SIM group learners were more enthusiastic and motivated for learning through SIM strategy. Sunaina Kumar and others (2005) conducted a study on the use of multimedia resources by IGNOU students. It was based on questionnaire administered to students during July 2004 to August 2005. The analysis of the responses reveals low awareness of these resources amongst the learners. It varies from a high of 50% awareness about audio cassettes to 29% about teleconferencing. Out of these, who are aware, only 20% use the audio cassettes and 14% use the teleconferencing facility. The reasons for non-use are the same as
reported in other studies. These are: lack of awareness, lack of facilities, unhelpful attitude of staff, timings of programme inconvenient and also dissatisfying response from experts in radio and teleconferencing programmes. Similar concerns and conclusions have been drawn in other such studies. (Raja Gopal, B, 2005 and Susamma, George, P, 2005). Venkaiah (2006) conducted a study of the use of TC and Tele Learning Programmes (TLP) by the M.B.A. students of BRAOU. It is discouraging to know that 40.6% of the students are unaware of such programmes of the university. There were comments regarding the programmes by those viewing the programmes that use of black board should be made. There is too much content included in a session that results in difficulty in understanding the topic. Other comments were similar to those obtained in other studies e.g. more publicity to be given about the schedule of the programmes in advance through different media, timings of the programmes should be either in the early morning hours or late evening hours during week days, TC should be on Sundays. Such measures would help to increase the viewer ship of these programmes. Planning and design of the learning resources is important but their value is realised if they are accessible to the learners. Gathegi and Mwathi (2007) stated that the Department of Library Studies at Kenyatta University in Nairobi, Kenya has for some time now been reviewing its curriculum, for the purposes of meeting the requirements and needs of a twenty first century global, networked society and to meet the country's information needs. To achieve this, the university has been working on approximately 10 different
programs from certificate to masters in both library and information science and archives administration/ records management. The paper analyzes the process involved in undertaking and critically examines the underlying assumptions embedded in the exercise. It discusses problem encountered, solution devised, and the products derived from the curriculum review. Sanjay Kumar and Praveen Rai conducted a study during 2007-2008 to review the effectiveness of the interactive multimedia learning resources utilizing Edusat, Television, Radio, Web platforms and Internet facilities provided by IGNOU. Data was collected by interviewing 2180 students at 13 SIT centres of 7 regional centres using a structured schedule. The results show a low use of these resources. Reasons include the lack of prior information about the scheduled programmes, lack of infrastructural facilities at the centres, etc. Suggestions to increase the use of these facilities include: information about the schedules in newspapers, TV channels, through SMS and sending e-mails. The suggestion is based on the data obtained in the survey that the respondents generally read newspaper, watch TV, own mobiles and also have e-mail accounts. A minimum attendance in these programmes should be made mandatory for learners, the sessions should have in-built interactivity, behaviour of the staff should be user friendly, the content in the programme should be made more communicative and viewer friendly, content should also be included from examination point of view, separate rooms should be provided for viewing these programmes, local facilitators should be present to help the learners to interact with the resource persons to increase
use. Kabonoki (2008) conducted a case study involving 429 distance education diploma students at the University of Botswana. The aim of study was to find out whatever these students had access to MP3 players and other technologies essential in distance learning. Finding shows that, contradicting the expectations, learners did not have access to computers (17.25%) and hence to the internet (3.7%) and the results had not changed in a significant way since the last survey in 1999 and 2001. It also emerged students favoured the technology. They were familiar with and expressed and apprehension in using computer in learning. Kurba (2008) highlighted emerging trends in the development of open and distance learning necessitating the use of different technologies. The use of technologies is dictated by different factors which are associated geographical conditions, economics of the said technologies, readiness of the consumers and finally the mind set of the policy makers. Although, new technologies are seen as complementary to enhance learning, the process has also experienced setback in the use of technologies and thereby witnessed a heavy dependence on print material. Learning through new technologies is an experience which is seen as a link between the tutor and learner in the process. Gupta and Garg (2008) described that the growth of open and distance learning has been phenomenal in India. Learner support is one of the most crucial components for his/her retention and success. Since not only open universities but distance education institutions are provided regular faculty, collaboration and partnership in networked environment have emerged as key strategies. For greater efficiency, higher productivity, enhanced
effectiveness, and better learner support, more institutions should be networked using Edusat and other more familiar, low-end technologies such as radio and educational TV. Only then we can hope to resolve the last mile problem for equitable access to education in A-3 syndrome. Practising ethos of sharing, IGNOU is extending its frontiers beyond national borders to promote cross-cultural partnerships, international peace and understanding, in conformity with the Indian thought of Vasudhaiva Kutumbakam. Mutanyatta (2008) attempts to provide relevant data on the achievements, albeit quantitatively, of the National Correspondence Institute of Tanzania over past 30 years as a case study in distance education innovation. The case study data reveal reason for the near collapse of the distance education to meet expanded secondary education development programmes in the twenty first century. For Tanzania to achieve equitable socio economic development effort need to be directed to adopting fully-fledged open and distance education policies. It is no longer feasible to achieve equitable access for all citizens to quality education by depending only on conventional formal education system. Adopting open and distance education learning system in the twenty first century is crucial. Raja Rao (2008) undertook a study to measure the access, awareness and use of media support services by the learners of Dr. B.R. Ambedkar Open University (BRAOU). The sample was drawn from the second and third year students of B.A., B.Sc., B.Com., M.B.A. and M.A. (Economics, History, Public Administration, Political Science, Sociology, and Mathematics). Majority of the learners were aware
of the media support services provided by the university. However, the majority of
the learners did not know about the availability of the media infrastructure at the
study centre which obviates the fact that these facilities at study centres are not
utilised. More than 70% of the respondents never listen to the radio programmes.
More than 90% of the respondents never listened to the audio-cassettes or watched
the video lessons, 65% never watched the T.V. programmes, 29% watched the
programmes sometimes, more than 66% never watched the teleconference sessions
whereas 23% watched these sometimes and more than 90% never watched the
phone-in radio counselling programme. The reasons for such a low use of these
programmes were given as follows: No information about the telecast schedule,
timings of the schedule not suitable. Raja Rao suggests the following for increasing
the use of resources: Media specialists should be involved right from the course
planning stage to make the programme more attractive and interesting; Sensitize the
counsellors to listen and watch the different audio and video programmes and make
notes to be shared with the students during counselling. This would help the students
realise the importance of these programmes in specific topics; Provide audio-video
lessons to the learners along with the course material so that they can use these at
their own convenience; More publicity need to be given to the media lessons, list of
appropriate programmes need to be given at the end of printed units, frequent
advertisements of the programmes in the radio and press would also help to increase
their use; Information about these programmes should be provided on the website so
that not only students but also the general public knows about it; Maintenance of the audio-video equipment regularly would enhance the use of such programmes. The learners also should be allowed to copy the lessons for use at home; Synchronise the f2f counselling sessions with TC and IRC so that the study centre staff ensures that the students are able to watch the programme; The telephone numbers of the counsellors and experts may be publicised so that those students who are not able to ask questions during the session are able to contact them for clarifications later; There should be a separate audio-visual room in the study centre for the learners to listen and watch the audio-video programmes; A monthly university newsletter having schedule of the programmes should be posted to learners individually to ensure that information reaches them; A number of new technologies find application in education but radio has its advantage in that it helps to stimulate and make use of the student’s imagination (Jones, 1962; Merdian, 1979). Jamaison and McAnany (1978) commenting on the usefulness of radio as a teaching tool state that it can be a better tool than traditional instruction in certain instances. Zaharias (2008) explained that e-learning is gaining momentum in corporate setting as an alternative and supplementary solution to learning and performance problems. Users of e-learning applications and courses differ across regional, linguistic, and country boundaries and user requirements are strongly influenced by their local cultural perspective. Thus e-learning design needs to be sensitive to cultural parameters. Yet, there are very few empirical studies that investigate e-learning design and usability
issues from a cultural perspective. This study: (a) discusses the cultural considerations in human computer interaction and information system research and the specificities of usability in e-learning context, (b) focuses on the usability evolution of e-learning courses within an international e-learning pilot initiative. Employees from four user organization representing four countries in South Eastern Europe participated as users of the e-learning courses and evaluated their usability. Zhao and others (2009) surveyed faculty and students in Association to Advance collegiate Schools of Business-accredited U.S. business colleges on their use of information technologies in distance education and their perceptions of the technologies' effect on productivity and technology preference. They collected data from 140 professors across the nation and 300 students from 4 states. The findings indicated that faculty and students used internet based tools heavily and perceived them as productivity enhancers. However, significant differences existed between faculty and students (i.e. although significantly more instructors preferred using TV based live video and audio, significantly more students’ preferred using Internet live, video and audio). Rai (2010) conducted a study of BLIS Learners of IGNOU in Delhi Region on the use of Multi-media resources. It was based on questionnaire administered to the BLIS learners during January to March 2009. The analysis of data reveals that printed materials has been a common and integral learning resource for these learners. SLIM and counselling are more popular among learners. 62% learners never used the IRC and 78% learners have never used Tele-conferencing
facility. SLIM found most useful by 96% learners. Findings of the study reveal low use of non-print learning resources. Infrastructural and attitudinal changes are needed for optimal use of Multi-media resources.

2.6 TEACHING METHOD

Lawton (1997) argues that tutorial support should enhance the learning experience of students who enroll on a distance education programme. Ley (1999) described feedback system for distant students including the tools and documents to provide feedback on frequent fixed response assignment and on projects or essay response assignment. A distance feedback system depends upon carefully planned, written assignments; specified evaluation criteria; and technology. It includes documentation, progress tracking, standardized responses based upon the specified evaluation criteria, and multiple assessments during the courses. Dash (2002) explained instructional development means development of instructional inputs for open and distance learning system. The use of these instructional inputs varies from one system to another system. However, there are certain inputs which are widely used in open and distance learning systems (ODLS) world over. These are self instructional materials, audio video materials, assignment, academic counselling, project work, workshop, teleconferencing, computer mediated instruction, etc.
2.7 QUALITY ASSURANCE IN DISTANCE EDUCATION

Hope (2001) opined that Commonwealth of Learning (COL) seeks to promote the value of open and distance learning in all sectors of human development and to assist member government in the development of policies and operating procedures to ensure the best application of open and distance learning system. In devising a quality assurance framework for open and distance learning in Commonwealth, which may span the full range of delivery method from print based and face to face tutor mediated to web-based and technology-mediated e-learning, COL will not have to blaze an entirely new trail. Further various benchmarks in open and distance learning have also been explained. Krishnan (2001) stressed that there is no point in emphasizing the need for assuring quality and better standards in any education system, as both these attributes are the life blood of any system. This fact is also applicable to DE. In India National Assessment and Accreditation council was established in 1994 to assess and accredit institution of higher education learning, the idea of quality audit became concrete. Further, it has been felt that the open and distance learning system must pass through the processing of assessment and accreditation. It hopes that National Assessment and Accreditation Council with Distance Education Council (DEC) will do this job in a better way. Lele and Bharat Bhushan (2001) emphasized that with the advent of ICT world become a global village and education is not an exception to this. In DE profitability and cost of study material is a function of student enrolment. The cost of study material goes on
decreasing with increase in enrolment and the programme of study becomes profitable. Keeping in view these factors, a model is needed for assessing the DE institutions. Various parameters of assessment have also been discussed. Mishra (2002) analysed that distance education or a programme offered through distance mode is an open social system to which the principles of system theory can be applied successfully. As in any system feedback loop is a common feature in distance education to take remedial measure. These are some feedback modes, active feedback from groups, passive feedback from individuals and active adhoc feedback from individuals. A learner’s feedback of post graduate diploma in distance education of IGNOU has also been conducted and results analysed. Mukhopadhyaya (2002) stressed that IT has emerged as a big stimulating force and it is strongly influencing the human mind and its thought process, the society and in the end the entire world. IT has enhanced its capacity of accumulating and storing information. All the information of a library can now be stored in one's own PC and access to that information is a matter of click of the mouse only. Thus ICT has a long recurring influence on the total education system. According to Powar (2002), distance education in its chequered history of over hundred years, starting with the Chautangua continuing education programme initiated by the University of Chicago in the 1890s has made use of varied technologies. The earliest of these, print materials, is still the favored mode in the developing countries but computer based online learning is becoming increasingly popular. The amazing development of
online education in the western world, suggest that even in the developing countries it will soon carve out a niche for itself - at least in the urban areas. The issue of quality in online learning should, therefore, be an area of concern. Rastogi (2002) suggests the open and distance learning system has accepted a big challenge of managing need based mass education with a flavor of openness at each and every stage. Androgogy has replaced the Pedagogy and the learner has to play a decisive role at each and every stage. It can be achieved if suitable multimedia packages are developed and used as mass media or individual media as and when required. The learner needs openness in selecting a media of his or her choice and mixes it with other media for achieving the target of optimum learning. Technological explosion, development in the field of education technology and the fruits of the science of management have jointly made it possible for open and distance learning to develop strategies for various activities from planning to result declaration by keeping the learner as its customer at the centre. Industrial nature of the Open University system has necessitated the involving of a wide variety of resource persons of various activities. These people are mostly hired from the society. They are trained and deployed as part-time workers for various activities like course developing, editing, counselling distance learners, setting question paper performance during examination etc. Every industry has a concern for bringing quality in the various activities, and so, an open and distance learning too has a concern for the same. Shafi (2002) explained that open and distance learning (ODL) institutions provide exciting
opportunities for education and training. They employ different teaching and learning strategies and cater to heterogeneous groups of learners. The outcome however differs. Accreditation of distance education programmes is, therefore necessary. There are two major purposes which accreditation serves. One is quality assurance: determining a standard of quality and performance for minimum acceptability in the interest of public, and the other is quality improvement providing a service that is design to improve institutions and programmes through an external review process. University and colleges need to evolve their own mechanisms of quality assurance for their academic performance and accountability to the society widely differ for reasons which are both internal and external to the system. Smith (2004) explained that the nature of quality teaching and learning in higher education has been subject to ongoing research and debate. In distance learning programmes, "teaching" comprises several distinct tasks including the provision of distance learning materials and the support of students' learning when they are away from the campus. The study of smith examined the nature of quality in terms of the provision of "off-campus support" to students in a particular postgraduate distance education context. A questionnaire was administered to investigate students' perceptions and expectations regarding off-campus support. While students identified support related to their academic work as being the most important component of an off-campus support system, issues related to the availability and accessibility of this support were also highlighted. These findings informed the development of a model of
quality off-campus support in the context of advanced level, distance learning programmes.

2.8 DISTANCE EDUCATION AND LIBRARIES

Saroja (2001) highlighted that the aim of DE and open learning is to offer education without the walls and boundaries of the campus. Knowledge, Information and Technology are the three important component of an Open University system. Knowledge is utilized, disseminated and shared in all the various stages of imparting education through distance mode. In the absence of a classroom environment, learners depend on the libraries and information centers for obtaining additional information. Therefore, library and information professionals have to play an important role liaising between the problems of learners and developing the system in support of their learning requirements. Libraries should transform themselves into information resource centers and adopt ICT to provide increased accessibility of knowledge. Libraries should designed user customized websites and provision for round the clock reference assistance. Tele answering system and E-mail provide faster mode of communication and can be used for providing information and reference service. Gupta (2002) says that distance education is one means of delivering education, which is being used increasingly. The development of advanced telecommunications has led to a paradigm shift in the distance education and training. Many virtual training courses have been created by virtual institution to allow employees to overcome the difficulties of geographical distance and limited
training time. Keeping in view the increasing number of students undertaking distance education programmes, libraries are being called upon to find innovative and imaginative ways to support such learning. Developments in technology are creating new possibilities for documents delivery and the distributed virtual library i.e., the 'library without walls' Each virtual library is designed to provide users with online access to an extensive array of full 'text document on a topic of current high interest or critical concern. Librarians have accepted the challenge of using the Internet as a means of allowing students to access library resources. Huang (2002) explained that modern open and distance education is a non-face-to -face new educational form based on the traditional correspondence education and distance education. With the rapid development of the Internet, rich and diversified information resources are required to meet the needs of distance learners. However, the providers of distance education in China face many challenges in developing information resources owing to the shortages of funds and experience. Needham and Johnson (2007) discussed library practitioners from either side of the Atlantic Ocean, embarked on a dialogue about the ethical challenges encountered in providing library services to distance learners. Unable to find an existing, appropriate ethical framework for their discussion, they agreed to devise their own, informed by relevant professional codes and guidelines. They propose 10 ethical principles for the provision of library services to distance learners. Drawing on their own experience, they highlight the challenges these principles present in practice and the
responsibilities of librarians and their institutions to meet them. Secker (2008) provides an overview of the University of London’s Libraries and Social Software in Education (LASSIE) project, led by LSE and the Institute of Education. The project explored whether social software, or web 2.0 technologies, could enhance the distance learners’ experience of libraries. It included a detailed literature review which defined concepts such as Library 2.0 and provided examples of libraries using tools like blogs, wikis, social networking sites, social book marking sites and media sharing sites. LASSIE also undertook five case-studies to explore in more detail; social software and reading lists; social book marking and libraries; pod casting and information literacy; blogging; and face book and libraries. It concluded that social software might be best utilised to enhance information literacy support for distance learners. Washburn and Wages (2008) discussed the development of the books and article delivery services at Brigham young University. Instituted in 2003, faculty delivery service was developed and refined to meet the diverse needs of students who are completing courses without the aid of on-campus resources. It also provides statistics and cost data in a common practices atmosphere. Past challenges and solutions are identified and anticipated future opportunities are also discussed. Tripathi and Jeevan (2009) explained that spectacular strides made in the field of ICTs have provided amazing tools for collecting, organizing storing, and sharing and disseminating information. Some of the academic Libraries have implemented blogs for fine tuning their servicing towards the users on the basis of survey of these
libraries and local IT experts, blogs have been implemented at the library and documentation division, IGNOU, New Delhi to improve the provision of library and information services. The students of IGNOU are located in far flung and remote areas of the country. They can not visit the main library in New Delhi. The use of blogs is intended to outreach and help the distance learners.

2.9 RESEARCH IN LIS

According to Kumar (1998) Universities are demanding a doctoral degree for library and information science faculty as well as for professional seniors in university and other higher education and research libraries. This led to increased research activity at various library schools in India. He provides statistics of doctoral research in India. The data of the doctoral research in India has been analysed chronologically, subject wise, guide wise, and university wise. Satija (1998) explained discovery and dissemination of new knowledge has always been a source of excitement and incalculable social benefit to the society. Tremendous progress made by the mankind in the 20th century is only due to research and new information. Information society subsists on information which is only generated by research. He briefly describes the beginning, growth of doctoral research and proliferation of education in library and information science (LIS) in India. He also
described the status and quality of research in LIS in India. Tejomurthy and Kumar (1998) discussed research in library and information science briefly means the collection and analysis of original data on a problem of librarianship done within the library schools according to scientific and scholarly standards. Briefly describes the research, its need and history, etc in LIS and presents the pattern and state of the art of research in LIS in India. The reason for slow growth in research in LIS in India, scanty financial support to it have been explored. Several suggestions to catalyse the research activities in LIS in India have been given. It concludes that there are research opportunities and research atmosphere in India and library professionals and LIS faculty should be involved in research to improve information sources and services. Marshall (2000) opined that theoretical models serve important functions in science. Building theoretical models which can be applied in distance learning situations should be a major activity for researchers and practitioner. At presents, the design, delivery, assessment and evaluation of distance learning is pragmatic and not theoretical, based on historical practice and not careful analysis of distance learning within and across paradigms-behaviorists and constructivist should be a major activity in order to create designs and delivery systems that explains and promote learning within distance learning situations.

During reviewing the above literature, It was observed there were so many new devices used to facilitate the distance learners at their pace like i-pod etc. There are self learning packages to provide a learning experience almost as real as face to
face conventional class room environment. The use of SMS also has been seen in Philippines and Mongolia. The timely response of the queries/doubts of the learners through e-mails, telephone etc is helpful to the users in completion of the programme of study smoothly and in time.

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