

LITERATURE REVIEW

2.0 INTRODUCTION

Literature review is done mainly to understand the research activities that have taken place in a particular discipline in general and the area of research in particular. It has become an essential part of any investigation as it identifies the problems and gaps in the area of research and also provides a basis for theoretical framework of the study and interpretation of it. Based on Busha and Harter (1980)'s work, Dharani (2013) opined that "a literature search is an attempt to identify, locate and synthesize completed research reports, articles, books and other materials about the specific problems of a research topic. The research literature and subsequent review can be of value to researchers by helping them to regard their studies as contributions to a large topic of which the inquiry at hand is only a part."

The present study is aimed at understanding the awareness of Blended Learning in LIS education; this kind of research is new in the field of library and information science in India, so an attempt is made to present review of all the available and relevant literature. The opinions on this topic from various dimensions have yielded invaluable set of research output. Considerable amount of literature is available regarding Blended Learning, LIS education, application of Information Communication Technology (ICT) in LIS education and e-learning. But studies are relatively few regarding the awareness of Blended Learning in LIS education. A survey of the literature found that most of the studies are reported from foreign countries and that such studies are not given due importance by the researchers in library and information science in India. While covering the literature, various sources i.e. periodicals, books, papers, review of articles, PhD and master dissertations, etc. in print as well as, digital formats have been accessed and referred. In this chapter an attempt is made

to highlight the review of literature available, in two broad headings listed below. The studies are further grouped under international, national and arranged chronologically.

1. Blended Learning

2. LIS Education

2.1. BLENDED LEARNING

With the rise of technological and pedagogic advances, many things came into focus which can be included in education in this global technological environment. Blended Learning is a term that deals with combining education with communication technology. It has changed the traditional methods of educational instruction providing a new method for teaching and learning. Thus with the help of Blended Learning a flexible approach to course design offering some of the conveniences of fully online courses without the complete loss of face-to face contact came into front. It is important to assess the Blended Learning applications in library and information education in the context of changing needs. This section includes studies related to Blended Learning both in India and abroad.

2.1.1. International Studies

Ali (2015) in his article entitled “*The Future of E-Learning and Tools in Higher Education*” discussed about the latest trends in e-learning and e learning tools. He viewed on Blended Learning method, synchronous and asynchronous systems, educational approach, and blackboard systems. Here the author discussed about the future of e-learning.

Jeffrey and others (2014) in their combined paper entitled “*Blended Learning: How Teachers Balance the Blend of Online and Classroom Components*” attempted to discuss what teachers actually do in Blended Learning. Here nine teachers from two state

universities of business course using Blended Learning were interviewed about their use of online and classroom components and the reasons for their decisions. It was found that classroom components were highly valued by teachers than online, an attitude largely driven by their perceptions that specific learning functions were best suited to particular formats. The decision to put learning content online or use in the classroom seems to be largely driven by the teacher's perception of the functions served by the two modes. Usefulness, ease of use, and student pressure were also considerations. It was seen that teachers neither fully exploited the opportunities offered by online contexts nor integrated the two modes to make their courses coherent for their students. These teachers seemed to view online technologies as being mainly for access and information delivery efficiency rather than to support students' learning experiences. Also developing content for two contexts increased teacher's workload, and teachers complained about the time commitments necessary to develop even minimal online components. This was an issue that must be addressed by institutions. The authors finally concluded saying that Blended Learning courses still failed to maximize the benefits that format offered and the relatively low adherence of teachers to good design practices in their courses was a common issue which need to be studied in large scale.

Horn and Staker (2014) presented a commentary on "*Blended Learning Is About More than Technology*" where they discussed about the Blended Learning and its implementation in schools. They talked about the fact that despite knowing the benefits of Blended Learning, teachers were often handcuffed in their ability to steer their way toward it. According to them Blended Learning is not inherently good or bad. It was not a solution to everything. Rather it was a pathway to student-centred learning at scale. Also that to yield the result out of Blended Learning, school leaders must not start with Blended

Learning or technology for its own sake, but instead undertake a careful design process to unlock its potential.

Powell, Rabbitt and Kennedy (2014) in their paper on “*iNACOL Blended Learning Teacher Competency Framework*” discussed about the framework for teachers which was developed by two organizations viz. International Association for K-12 Online Learning (iNACOL) and The Learning Accelerator (TLA), along with other committee members for helping educators to succeed at adopting and implementing Blended Learning at scale. According to them Blended Learning is a powerful way to differentiate and personalize instruction, as well as to help move away from time-based models of achievement towards competency-based ones. They pointed out that Blending Learning was a strategy for helping teachers achieve what they strive to do every day—deeply understand and enable each student to reach the highest levels of educational mastery. The Framework identified 12 specific competencies, which were organized into 4 larger domains—mindsets, qualities, adaptive skills, and technical skills.

Rabin (2014) in his paper entitled “*Blended Learning for Leadership the CCL Approach*” discussed about Blended Learning for leadership as figured by the Centre for Creative Leadership (CCL). According to the author, Blended Learning for leadership must go beyond coursework to engage leaders in the domains of developmental relationships and challenging assignments, which research shows, is critical for leader development. He stated that Blended Learning was a combination of formal learning combined with workplace-based or “informal” learning opportunities addressing all segments. The challenge was to support the learner with appropriate materials, technology platforms. Specific areas that CCL is exploring include: Feedback, Apps and Mobile Learning, Social Media, MOOCs, Lessons of Experience and Action Learning Blended Learning for leadership was not just about technology or mixing classroom with online

experiences. It was not about social media or the latest trends that promise to transform learning forever. It was about building, in a thoughtful, systematic way, a structure to enable and support how leaders learn best.

Embi (2014) in his edited book named *“Blended & Flipped Learning: Case Studies in Malaysian Higher Education Institutions”* discussed about the concept, dimensions, factors for promoting Blended Learning models, examined the role of teachers and learners in technology integration. Here the editor discussed about the Malaysian scenario of Blended Learning along with regulating learning through linking, flipping and wrapping.

Graham (2013) dealt extensively in his paper titled *“Emerging Practice and Research in Blended Learning”* the concept of Blended Learning as the combining of online and face-to face instruction. Here models of Blended Learning for higher education, k-12, and corporate training were highlighted. Also current research related to Blended Learning was mentioned around the themes of theory, learning effectiveness, learner satisfaction, faculty satisfaction, access and flexibility, and cost effectiveness. The author concluded with recommendations for future research related to Blended Learning environments.

Karr (2013) in her paper named *“Understanding Blended Learning”* discussed about Blended Learning saying that there was nothing to make hue and cry on Blended Learning as we had been using Blended Learning for decades; it was just that the term was new to the dictionary of education profession. The author defined Blended Learning as a mix of learning modalities, it includes multimedia, online courses, instructor led classes, books, videos, simulations, and job aids. Also it was said that these blends could range from simple to complex, but the goal was to create a more effective and efficient learning

experience which cannot be achieved with just a single type of learning. Author concluded saying that there were as different blended-learning models according to different organizational challenges. It had a benefit that we can blend our own mixture to meet the learning needs of our student and as we continue to grow, combinations of eLearning and other modes could be developed to match the available technology, the distribution of the workforce, and the availability of trainers.

Drysdale and others (2013) in their paper entitled “*Analysis of Research Trends in Dissertations and Theses Studying Blended Learning*” made an analysis of the research of 205 doctoral dissertations and masters theses in the domain of Blended Learning. The trend as well as growth of the research in Blended Learning was well discussed. The paper also showed the methodological trends that had been used like qualitative, inferential statistics, descriptive statistics, and combined approaches to data analysis. They found that the research topics were divided into nine topics viz. learner outcomes, dispositions, instructional design, interaction, comparison, demographics, technology, professional development and others each containing several sub-topics. They concluded their study by finding the gaps in research and highlighted to fill those as the field of Blended Learning continues to grow.

Torre (2013) in her paper entitled “*Variances on Students’ Blended Learning Perception According to Learning Style Preferences*” investigated the variation of the learners’ perception on Blended Learning in terms of their learning styles. The author used Blended Learning Environment (BLE) questionnaire to determine the students’ Blended Learning perception and the Felder-Soloman Index of Learning Style (ILS) to measure the students’ learning styles. Her study concluded with results that students’ perception on Blended Learning differed among active-reflective and visual-verbal learners whereas learners classified as sensing-intuitive and sequential-global did not significantly vary in

Blended Learning perception. Also it came to front that teachers should consider students' learning style in the design, implementation and evaluation of Blended Learning in future.

Saleem (2013) in his article entitled "*Blended Learning Is the Natural Evolution of Electronic Learning*" covered Blended Learning with its features, concept, models, success criteria and application in the university teaching. The author here tried to say that many studies had agreed on the fact that Blended Learning was the natural evolution of E-learning. According to the author, Blended Learning is perceived as a teaching – learning method which blends modern techniques and traditional methods together in specific time and place frames, within normal environmental classroom teaching circumstances, where the teacher and the student interact, one another according to his role and the requirements of the teaching situation, with the least possible cost in order to reach the teaching outcomes with high competence and quality. Here the author stressed that the obstacles was the application of Blended Learning were the high financial cost of the inputs of such kind of learning, the low level of education experience and skill of some teachers and students in dealing seriously with ICT and teaching technology. Finally the paper concluded with the mentioning of the fact that the inputs of the instructional process and the procedures of its implementation need to be reconsidered to cope up itself in the modern technological evolution.

Rajkoomar (2013) in his article entitled "*Blended Learning in Library And Information Science (LIS) Education And Training*" explored the thought of reshaping the current teaching and learning practices in LIS education and training and examines the use of technology enhanced teaching and learning. The study explored the need for developing a framework for designing and implementing Blended Learning in LIS education. As Library and information field is deeply rooted in ICT, therefore the author discussed about the use of digital technologies into pedagogy, which would help to have a carefully

articulated instructional and learning outcomes. Some of the tool like Learning Management Systems (LMS), podcasts and blogs and strategies using technology for teaching and learning were discussed in this study. The study aimed to identify the viability of using technology in teaching and learning in the Library and Information Studies (LIS) education and training. The study showed that students were pleased to access course material as well as other content such as discussion forums, calendars and readings from the e-classroom at anytime. The interviews with LIS educators showed that all the participants were eager to embrace innovative methods using technology in teaching and learning in the LIS programme although some LIS educators had some reservations with regard to student attendance, language issues and cost to the students.

Bailey and others (2013) in their article *“Blended Learning Implementation Guide”* discussed about Blended Learning and also formulated an implementation guide on this for the educational leaders to achieve success in planning, implementing, and evaluating Blended Learning effort. They discussed on four points; creating condition for success, planning, implementation, and continuous improvement. This guide is also useful for the policy makers to gain an understanding of the fact that schools and institutions are likely to face transition in coming years. According to the authors Blended Learning is more than electronic text books and productivity tools. It means inventing and adopting new learning environments that work better for students and teachers. They concluded saying that implementing Blended Learning is a complex task which requires integrated plans for teaching and learning, information technology, finance, human capital and communication. They also said that as Blended Learning is at its initial stage, likewise this guide is also on its first stage and it will be updated based on the lessons learned by the education leaders.

Francis and Shannon (2013) in their article named “*Engaging with Blended Learning to Improve Students’ Learning Outcomes*” studied Blended Learning in architectural (engineering) discipline. They argued that Blended Learning was the best practice instructional model as it offered seamless amalgamation of carefully selected online modules with face-to-face instruction. The result of the study showed that student engagement with carefully integrated online elements, such as online lectures, was positively correlated with improved student learning outcomes at both assignment and subject level. This correlation was significant. In the concluding lines they mentioned that the study had shown that broader adaptation of subjects for Blended Learning was constrained by the reliance upon non-faculty staff for delivery and assessment. Non-faculty staffs believed that studio-based subjects with complex assessment could not benefit from this mode of delivery or alignment with this mode of assessment is also related to their fears of redundancy. Lastly they mentioned some recommendations to be adopted by different levels like institution, school and staff.

Alebaikan (2012) in the article named “*The Future of Blended Learning*” dealt about Blended Learning and how this is related to higher education today. Here the author said that much had been discussed about Blended Learning but one thing was still untouched in this regard was that the future of Blended Learning in Saudi context. This study addresses this gap and explores the views of lecturers and students towards the future of Blended Learning in Saudi Arabia. The study showed that Blended Learning had the potential to offer an excellent learning experience in Saudi Arabia. Lecturers and students expressed positive attitudes towards Blended Learning experience. It was seen that Net Generation students were ready for this change. Also the characteristics and structure of Blended Learning were compatible with the uniqueness of the Saudi culture, especially in issues related to women’s education. Authors also mentioned that from the perspective of

the female Saudi students, Blended Learning environment offers them the flexibility to continue their Higher Education while maintaining their own cultural values and traditions. Therefore, Blended Learning was clearly a feasible solution for women in Saudi Arabia. The author concluded saying that the future of Blended Learning would have a strong impact on the learning environment in Higher Education though there was some doubt on speed of the adoption of using technologies in learning and its influence on the expansion of Blended Learning in Saudi Arabia.

Owston, York and Murtha (2012) in their article entitled “*Student Perceptions and Achievement in a University Blended Learning Strategic Initiative*” examined the relationship between student perceptions in Blended Learning courses and their in-course achievement. Perception of the students were assessed in four areas like overall satisfaction with Blended Learning, convenience afforded by Blended Learning, sense of engagement in their blended course, and views on learning outcomes. The study showed that high achievers were the most satisfied with their blended course, and preferred the blended format more over fully face-to-face or online than those with low achieving students. They found blended courses more convenient, engaging, and they felt that they learn key course concepts better than in other traditional face-to-face courses they have taken. This study showed that low achievers were not able to cope up with the blended environment. So, the authors suggested that institutions when taking up Blended Learning should consider offering students a choice of whether to enrol in blended or fully face-to-face course sections where feasible, especially in subject areas that students find difficult.

Jeffrey and others (2012) in their article entitled “*Strategies for Engaging Learners in a Blended Environment*” discussed about the project supported by the Ako Aotearoa National Project Fund 2009. This project was made to find effective strategies which teachers can use within a Blended Learning environment to enhance learner

engagement and achievement. A framework for considering engagement in a blended environment is developed based on three key points which are capturing engagement, maintaining engagement, and re-engaging those who have either never engaged or have become disengaged. The study gave a light to top 10 engagement strategies from the literature. After that findings were drawn which included 16 major points. Based on these findings the authors concluded the project giving away 5 remarks which was expected to be taken in consideration by the teachers and organisations with reference to their context and current practices. Further the project gave recommendations at each national, institutional and for teachers. Also a toolbox had been developed which contained strategies, tools and examples that could be used when designing Blended Learning courses.

Moskal, Dziuban and Hartman (2012) in their article entitled “*Blended Learning: A dangerous idea?*” covered extensively the area on which the implementation of a successful Blended Learning program had to depend on institutional goals and objectives, alignment of institution, organizational capacity, a vocabulary and definitions, faculty development and course development support, support for online students and faculty, reliable and robust infrastructure, proactive policy development, continuous evaluation. The authors used the results collected from the evolution of Blended Learning at the University of Central Florida as a model that with proper support and planning, Blended Learning could result in positive institutional transformation.

Naaj, Nachouki and Ankit (2012) in their paper entitled “*Evaluating Student Satisfaction with Blended Learning in a Gender-Segregated Environment*” discussed about student satisfaction which was considered as an important factor in measuring the quality of Blended Learning. Here authors had tried to give a report on a study conducted in the College of Information Technology to evaluate levels of student's satisfaction with

Blended Learning. The college combined an equal balance of traditional face-to-face and videoconference learning, complemented with the use of a learning management system (Moodle). Further a model was proposed by the aggregation of these factors into five groups: instructor, technology, class management, interaction, and instruction. This study helped to develop an instrument that could be used to measure student satisfaction with Blended Learning and explore whether satisfaction differs according to gender and the results indicate that the Student Satisfaction Survey Forms (SSSF) used were a valid measure of student satisfaction. It showed that students were satisfied with all components, although the level of satisfaction varied according to gender.

Khan and others (2012) in their article entitled “*Study of Blended Learning Process in Education Context*” discussed the Blended Learning process and the advantages of using Blended Learning technique in an education system. The paper also discussed about the assessment method to be considered in this learning techniques. Pitfalls in blending learning were also discussed in the article.

Liu and Yu (2012) in their paper entitled “*Effectiveness Study of English Learning in Blended Learning Environment*” studied the inner relationship between learning motivations and learning strategies in the Blended Learning environments. Social cognitive approach was used here and questionnaire was distributed to non-English majored students in Dalian University of Technology who learnt English in a blended environment. The study showed that students who displayed more adaptive self-regulatory strategies demonstrated better learning efficacy and higher motivation came with the help of learning motivation and strategies. They concluded the study saying that various kinds of learning strategies could be introduced and explained in English teaching and learning, which in turn would narrow the gap of students’ English learning efficacy in Blended Learning environment.

Marsh (2012) in his book named *“Blended Learning: Creating Learning Opportunities for Language Learners”* discussed about how Blended Learning could help to achieve the “optimal” language learning environment. The chapters discussed the criteria and factors that would help to choose the appropriate “blend” for students. Also how the role of teacher and learner would make blended language learning more effective. Finally the author gave away template to start designing own blended pathway.

Movahedzadeh (2011) in her paper entitled *“Improving Students’ Attitude toward Science through Blended Learning”* introduced Blended Learning in science and discussed how science played an enormous role in everyone’s life and also the fact that there existed a negative attitude in students towards it. So the author in order to motivate students and improve their attitudes toward science, thought of one important opportunity, at a time when technology was playing such a prominent role in their lives, was for instructors to redesign their traditional courses using a hybrid model. In this study the author discussed about her personal experience in teaching biology through Blended Learning. The author concluded saying that hybrid instruction is as good as the traditional methodology. It has the added advantage of being more efficient in its use of space, more flexible for working adults, and more conducive to the sharing of best practices among faculty in a department.

Parker (2011) in his report named *“How to Create Blended Learning Internal Proposal / Business Case: 10 Steps To Help Build Your Business Case”* tried to create an internal proposal that forms a robust business case which would result in funding for learning initiative. In short, Blended Learning should be designed to fit specific organisational and learning needs. This paper pointed towards the need for 10 consideration areas when building an internal business case for the introduction of Blended Learning.

Torrisi-Steele (2011) in the article entitled “*This Thing Called Blended Learning – A Definition and Planning Approach*” discussed about Blended Learning, professional development and learning technology. This paper tried to address the issue of solid definition of Blended Learning. The author was of the view that in the absence of pedagogically focused definitions it is difficult to designate the nature of implementation, measure success and provide appropriate institutional support. Here the author studied definitions of Blended Learning in literature and argued that a better foundation for practice is laid by a definition of Blended Learning focusing more on the learning and teaching rather than the presence of technology. Also a planning approach was proposed based on the notion that Blended Learning is a ‘pedagogical needs based’ rather than techno-centric. Lastly the author concluded saying that the availability of technology as a tool intertwined with f2f methods makes possible design of learning activities more congruent with the learning needs of current society.

Bruce (2011) presented a paper on “*Practical Experience with Avatars, Blended Learning, and Representation*” where he discussed about Blended Learning, University of Illinois Graduate School of Library and Information Science (GSLIS), LEEP online education program and Avatars which means an online version of a person. Here the author said how LEEP was being used by the said department and also how that worked. Next the author moved to Blended Learning form which is a mix of both on and off line mode of learning and teaching. Lastly author concluded saying that the importance should on learning and all students, sitting in the classroom or on the screen, should equally feel that they were part of the class.

Cheung and Hew (2011) in their article entitled “*Design and Evaluation of Two Blended Learning Approaches: Lessons Learned*” discussed the two Blended Learning approaches used at the National Institute of Education in Singapore. The first Blended

Learning approach, has integrated one asynchronous communication tool with face to face tutorials, classroom discussions, and a reflection session and the second Blended Learning approach, has integrated two asynchronous tools with face to face tutorials in a course. They also discussed the theoretical foundation of the two Blended Learning approaches. Finally, they concluded with several important lessons learned which could help in the design of future instructional strategies in implementing Blended Learning in university.

Ashby, Sadera and McNary (2011) in their article named *“Comparing Student Success Between Developmental Math Courses Offered Online, Blended, And Face-To-Face”* presented a research study which compared student success in a Developmental Math course offered in three different learning environments (online, blended, and face-to-face). They used quantitative instruments and data were collected from 167 participants which included demographic information, unit test grades and standardized Intermediate Algebra Competency Exam scores. The study revealed that there were significant differences between learning environments with the students in the blended courses having the least success also the face-to-face students performed most poorly. Finally, the authors concluded saying that academic and other contextual factors affecting retention and attrition needs to be taken into consideration in future research efforts, especially considering the growth of online courses in community colleges and developmental coursework.

Amin and Gerbic (2010) in their article entitled *“Exploring the Use of Digital Library Services in a Blended Learning Environment: A Malaysian Higher Education Perspective”* dealt extensively on digital libraries, Blended Learning and higher education. In this study, the authors reflected the fact how the emergence of Blended Learning had raised new issues and challenges as libraries consider how to better support students in their learning. Here partial findings of a research project were presented which showed the

use of a Malaysian university's digital library services in a Blended Learning environment. The study revealed the main influences in the use of digital library services by students like accessibility; language barriers; time constraint; and preferences and options. The study also revealed the existence of a digital divide. Finally, authors of the paper concluded by saying that university librarians need to work on information literacy, blended librarianship, and their Web 2 applications and to focus on digital inclusion rather than the digital divide.

Poon, Royston and Morrison (2010) presented a paper on "*Blended Learning: A Strategy To Enhance Students' Learning Experience And Engagement*" where the authors reviewed applications of Blended Learning in NTU's UG and PG programmes. They also examined the benefits that Blended Learning and identified successful factors for Blended Learning which helps to provide to students' learning experience. Also explored how students had utilised Blended Learning. Finally authors concluded by giving some recommendations for the development of Blended Learning as learning and teaching method which are as follows: Blended Learning is not an economic measure/ approach for teaching, have to be prepared to invest time and resources on developing and maintaining a successful Blended Learning environment like equipments, staff time, administrative time, support from senior management and assurance of face-to-face contact with students as students need re-assurance and ongoing support from lecturers.

Vesisenaho and others (2010) in their article entitled "*Blended Learning with Everyday Technologies to Activate Students' Collaborative Learning*" sketched the concept of collaborative learning, education technology, ICT, Blended Learning and the Net generation. They showed in the study how time is changing and how this is creating effect on education. Students now carry mobile phones everywhere, and are well acquainted with different online environments, especially social software. The authors here

reflected the possibilities of mobile technologies and social software in the contexts of Blended Learning and collaborative learning theories. Here two cases of the development work conducted at the University of Eastern Finland, School of Applied Educational Sciences and Teacher Education have been shown where they designed and tested new ways of teaching and learning using mobile technologies for supporting collaborative learning. Authors concluded saying that mobile technologies and social software pose challenges especially for teachers to design but the challenge is to be met as it is important to be aware of the possibilities and have the capability to respond to the demands of the information society and the Net generation.

Yukawa (2010) in the article named "*Communities of Practice for Blended Learning: Toward an Integrated Model for LIS Education*" presented the scenario of LIS programs which face the dual challenge of providing quality education and preparing future professionals to work in blended environments. Here a Community of Practice model for Blended Learning as a guide had been discussed including its pedagogical foundations, its features and the educational practices required to implement and design of effective learning environments so as to develop student growth related to core LIS concepts, practices, values, and leadership skills. The findings about student learning outcomes in one graduate level LIS course showed that the approach was sufficiently effective to warrant further use and refinement.

Woodall (2010) in his paper named "*Blended Learning Strategies: Selecting the Best Instructional Method*" discussed about Blended Learning and how various components of a well-designed Blended Learning program can be effectively delivered. The author is of the view that Blended Learning is a powerful strategy and if it is well designed, it would help to addresses many learning style requirements, wider audience, and increased performance or learning results. The paper discussed how by mixing traditional

methods with new ones, we would have synchronous and asynchronous tools that provide modern training and learning programs with two very powerful methods. Here the author discussed both of the learning experiences with their instructional methods.

Azizan (2010) in the article named *“Blended Learning In Higher Education Institution in Malaysia”* conducted an exploratory study of Blended Learning in higher education institution (HEI) in Malaysia. The author discussed classroom learning, online learning and their weakness and strength. The main focus was on understanding what it meant by Blended Learning, its benefits and the implementation of Blended Learning at HEIs. Moreover, this study also reviewed a few models or frameworks proposed by the researchers to generate the best Blended Learning models. It was seen that all models were not equally good. The author viewed that in designing Blended Learning framework, the challenge faced by educators and learners is to maintain the flexibility and imagination to adapt the new tool. Hence, the author concluded by pointing towards the need to explore educational theory and its relationship with technology is essential.

Ayala (2009) in her article entitled *“Blended Learning as a New Approach to Social Work Education”* discussed about the use of Blended Learning in social work education. The author discussed about the rise of use in online learning and technology by social work education. The paper also discussed the rise of online learning in higher education, also the convergence of online and traditional education. The potential of Blended Learning in social work education was well discussed here. Further research in evaluating the effectiveness of Blended Learning was recommended by the author.

Reaburn, Muldoon and Bookallil (2009) in their article *“Blended spaces, work based learning and constructive alignment: Impacts on student engagement”* studied students’ active engagement in the context of aligned curriculum and instruction. The results showed that course redesign has lead to increased student engagement and

achievement of higher order outcomes. The study involved an undergraduate course in the Bachelor of Occupational Health and Safety and Bachelor of Human Movement Science. This course utilised Blended Learning environments to facilitate work-based learning and mediate student active engagement. The role of Blended Learning environments was also discussed there. The author viewed that ICT will continue to challenge both students but educators. The authors concluded by saying that constraints are widespread across the higher education sector and therefore suggested the need for a systematic exploration of the matter.

Precel, Eshet-Alkalai and Alberton (2009) in their article named *“Pedagogical and Design Aspects of a Blended Learning Course”* discussed about students’ perceptions of pedagogical and design issues related to a new model for Blended Learning used in a graduate-level course at the Open University of Israel in which online learning technologies were used to create an effective and satisfactory online learning environment. The study showed the importance of completing the pedagogical and visual design of online learning in advance also, the course model suggests ways to bridge the gaps between students and instructors and students and their peers, which are typical of online learning in general and of open universities in particular.

Akyol, Garrison and Ozden (2009) in their article named *“Online and Blended Communities of Inquiry: Exploring the Developmental and Perceptual Differences”* discussed about the development of a community of inquiry in an online and a Blended Learning environment. The study was made to show the developmental differences of the three presences (social, teaching, and cognitive) in the community of inquiry framework and students’ perceptions of a community of inquiry. The main emphasis of the Communities of Inquiry framework was to create an effective learning community that enhances and supports deep approaches to learning. The best part of this research was the

examination of a community of inquiry in a Blended Learning environment. The results showed how blended course has advantages over the online course like reduces the time needed to develop group cohesion, promotes reaching higher levels of inquiry by enabling more time for the integration and resolution phases and satisfies more students by providing multiple forms of communication.

Vasileiou (2009) in her article entitled “*Blended Learning: the transformation of Higher Education Curriculum*” reviewed literature and current information related to Blended Learning. The author tried to explore the areas of Higher Education that affected curriculum and how the Higher Education curriculum got transformed because of the use of ICT and how to promote democratic skills through Blended Learning. The paper dealt with several primary research issues like redefining of the role of student, teacher/tutor, learning and the educational establishment. The author finally analysed and discussed the selection of strategies to increase interactivity and active learning, learner characteristics, learner support and operational issues. The author concluded by identifying different requirements required for today’s Higher Education like identity of time, identity of place, identity of the student community and the identity of scholarly community and how Higher Education needs to meet those requirements.

Sinclair (2009) in the article entitled “*The Blended Librarian in the Learning Commons: New Skills for the Blended Library*” expressed that blended librarian is focused on course goals and learning objectives outside of the library and across the curriculum. The blended librarian is there to provide guidance and expertise; besides books, articles, and reserve readings (both electronic and print) for faculty and students, they offer streaming video, podcasts, digitized images, 3-D animations, screen casts, etc for instructors who seek to use new forms of multimedia to engage students and enhance the learning experience. The blended librarian is versed in both print and online tools and can help faculty meet course goals, regardless of the medium or technology. The author talked

about the evolving phase of academic library and how they are seeking to reinvent their physical spaces, transforming them into social, cultural, and technological centres where students, faculty, and other users can gather and work collaboratively with digital and print media under one roof. Libraries still have a place on today's campus, but it must expand what it offers if it expects users to come to them and it is now up to them to respond to the needs of the next generation of learner. The author finally concluded by pointing out some steps that blended libraries and librarians can take to better promote the learning commons, themselves, and their services.

Chew (2009) in her thesis named "*A Blended Learning Model in Higher Education: A Comparative Study of Blended Learning In UK and Malaysia*" explored Blended Learning experience of four HEIs in the UK and Malaysia where she aimed to explore, analyse and compare the Blended Learning experience in higher education. The researcher tried to have academics' views and possible educational theories which may enrich the definition and theoretical ground for Blended Learning. The study was a comparative research in conventional Blended Learning environment in different dimensions - from different discipline to different HEI as well as different countries. Research result showed that Blended Learning adds much more educational meaning than does "e-learning" or "technology enhanced learning" that focuses on the "e" or the technology. The findings of the study showed that participants from the UK and Malaysia had similar confirming and disconfirming experiences. Comparatively, UK academics and students expressed more disconfirming experiences in a wider and deeper way whereas Malaysian academics and students expressed fewer disconfirming experiences. Finally the researcher concluded that it was not the use of technology which impressed much; it was the lecturer because technology alone can't do anything but it needed the educator who integrates the technology.

Akkoyunlu and Soylu (2008) presented a paper on “*A Study of Student’s Perceptions in a Blended Learning Environment Based on Different Learning Styles*” discussed about Blended Learning and learning styles. Here the author first described the reasons what made for the arrival of Blended Learning in education scenario, then he discussed about the Blended Learning and mentioned about one learning style - Kolb’s Learning Style Inventory (LSI). The authors through this paper examined the thirty-four students at Hacettepe University, Ankara, Turkey and their learning styles and their views on Blended Learning. Two instruments used in this study were the questionnaire designed to identify students’ views on Blended Learning and Kolb’s Learning Style Inventory (LSI) to measure students’ learning styles. The study showed that students’ views on Blended Learning process, such as ease of use of the web environment, evaluation, face to face environment etc., differed according to their learning styles, no significant differences between students’ achievement level according to their learning styles is seen. The author concluded saying that assessing Learning Style would help learners to perceive, interact and respond to the learning environment. This study was significant for educators, prospective teachers and academic institutions.

Owston, Sinclair and Wideman (2008) in their article entitled “*Blended Learning for Professional Development: An Evaluation of a Program for Middle School Mathematics and Science Teachers*” discussed two one-year professional development programs for middle-school mathematics and science/technology teachers that employed Blended Learning. The Blended Learning program, known as the Teacher eLearning Project (TeL), was being used which had a module that consisted of a daylong face-to-face session followed by an eight-week online session. The study showed how the program affected teacher attitudes toward and pedagogical practices in these subjects and on student perceptions and learning of the subjects. The study used Guskey’s (2000) five-level

evaluation framework to assess the impact of the programs on teachers' attitudes and knowledge, institutional support for the programs, changes in classroom practices, and student perceptions and learning of the subjects. The study results showed that the program influenced positively teacher attitudes and content knowledge in certain curricular areas and motivated many to transform their classroom practice to varying degrees. But this was not same in case of student where responses were mixed. Finally the authors concluded saying that further research should be made to examine the nature of the online tasks given to teachers, the role of the online facilitators and the impact on student achievement.

Stacey and Gerbic (2008) in their article named "*Success Factors for Blended Learning*" beautifully sketched the concept of Blended Learning. The authors discussed about the factors that promote Blended Learning. They grouped them in three parts viz. institutional, teachers and students. The paper also accepted that there are challenges, especially in responding to the complexity of two environments and embedding it as a legitimate learning environment. Finally they concluded by opining for further research on the matter.

Allan (2007) in her book named "*Blended Learning: Tools for Teaching and Training*" has very beautifully described what is Blended Learning, tools and technologies, models of Blended Learning. She provided knowledge on design and development of Blended Learning programmes.

Delialioğlu and Yildirim (2007) in their article entitled "*Students' Perceptions on Effective Dimensions of Interactive Learning in a Blended Learning Environment*" studied students' perceptions of the effective dimensions of interactive learning in a hybrid course. The Author used a case-study where 25 students enrolled in "Computer Networks and Communication," at a public university in Turkey. The study showed that the way instructive and constructive elements are blended, there raised the need for metacognitive

support, authentic learning activities, collaboration. The author finally viewed that the things that played an important role in students' learning in the hybrid course were source of motivation, individualized learning, and access to the Internet.

Chen and Jones (2007) in their article entitled *“Blended Learning vs. Traditional Classroom Settings: Assessing Effectiveness and Student Perceptions in an MBA Accounting Course”* compared the Master of Business Administration (MBA) students in an accounting class at a university in the Northern United States and discussed about assessments of course effectiveness and overall satisfaction with the course. There were two groups of students and section, one traditional in-class section and other Blended Learning section. The study showed that students who were in the Blended Learning section were in favour of this form of course and would take another using that approach if it were offered. Also the study showed some students in the traditional section were more satisfied with the clarity of instruction where as the students in the blended-learning section felt that they gained an appreciation of the concepts in the field and their analytical skills improved as a result of the course. The authors finally concluded saying that both course delivery approaches serve vital purposes in today's increasingly-competitive education marketplace, and perhaps both can continue to improve as instructors learn from both delivery methods but the goal for educators must be to continuously improve in whatever delivery method they are using in order to ensure that their students are gaining the necessary knowledge and skills.

Bliuc, Goodyear and Ellis (2007) in their article entitled *“Research Focus And Methodological Choices In Studies Into Students' Experiences Of Blended Learning In Higher Education”* reviewed representative research into Blended Learning in universities, taking into account the methodology used, the focus of the research and the relationship between the two. The study revealed that most research was case-studies, survey-based

studies or comparative studies. And a small number of holistic approach. The authors therefore, recommended for more holistic research. The authors viewed that educationally useful research on Blended Learning needs to focus on the relationships between different modes of learning (for example, face-to-face and on-line) and especially on the nature of their integration. The authors finally concluded saying that there was the need for some reduction of complexity so as to make research tractable. Also that the methodological plan for any future research into Blended Learning should consider both understanding parts and understanding wholes, as well as its contribution in relation to the approaches and evidence that already existed in the literature.

Ginns and Ellis (2006) in the paper named *“Quality in Blended Learning: Exploring the relationships between on-line and face-to-face teaching and learning”* conducted a study to develop a coherent approach to evaluate the quality of e-Learning, when on-line activities are used to complement face-to-face teaching and learning. The study represented the beginning phase of development of a student-centred approach to quality improvement and evaluation of learning in a Blended Learning context. The study showed that there has been little systematic quantitative research to date that has addressed key aspects of student learning in on-line and how they are related to face-to-face experiences of learning. This study clarified useful ways of addressing this gap in the literature. The study showed positive response in student’s perception of the quality of teaching on-line and the level of interaction were strongly related with a comparatively higher grade. Therefore, the authors suggested that if teachers want students to get the most out of learning on-line in blended contexts, then teaching strategies that clarify the value of moderation of student postings, and the value of interaction between the students online, are likely to improve both the students' perceptions and their grades.

Moebis and Weibelzahl (2006) in their article entitled *“Towards a Good Mix in Blended Learning for Small and Medium-sized Enterprises – Outline of a Delphi Study”* discussed about the learning in small and medium size enterprises (SMEs), Blended Learning, frameworks in Blended Learning, obstacles in Blended Learning, success factors in Blended Learning, Delphi method, and lastly concluded with results. The author opined that SMEs are often innovative, but under high economic pressure and this is a threat to ongoing learning activities although continuous training and learning is necessary to stay competitive. The study aimed to explore a good mix in Blended Learning for SMEs. Here Blended Learning was described as a learning environment that either combines teaching methods, delivery methods, media formats or a mixture of all these. The sun learning ecology matrix of Wenger and Ferguson (2006) aims at delivering a high quality learning experience and to provide control over the learning experience for both, the learner and the instructor. The authors proposed to use this to provide guidance for the selection of delivery methods, considering the learning needs as well as available resources.

Rovai and Jordan (2004) in their paper named *“Blended Learning and Sense of Community: A Comparative Analysis with Traditional and Fully Online Graduate Courses”* covered the concepts of Blended Learning and sense of community in higher education. The study examined the relationship of sense of community between traditional classroom, blended, and fully online higher education learning environments. The study showed that the blended concept of learning is highly consistent with the three areas of change with thinking less about delivering instruction and more about producing learning, reaching out to students through distance education technologies. Blended courses produce a stronger sense of community among students than either traditional or fully online courses.

Bonk and Graham (2004) in their book entitled *“Handbook of Blended Learning: Global Perspectives, Local Designs”* gave a picture of Blended Learning concept and models for different organisations like universities, corporate sector, higher education. The authors discussed about designing and supporting Blended Learning. Also discussed trends, perspective and program innovations related to Blended Learning. Again Blended Learning was discussed in terms of workplace, on demand and authentic learning and in context of Cross Cultural Programs and Policies. Next in relation to Blended Learning research, caveats, and guidelines were discussed. Finally authors concluded with future trends of Blended Learning.

Garrison and Kanuka (2004) in their article entitled *“Blended Learning: Uncovering Its Transformative Potential in Higher Education”* discussed the transformative potential of Blended Learning in the context of the challenges facing higher education. Blended Learning’s potential to support deep and meaningful learning was beautifully discussed there. The authors viewed the need for rethinking and restructuring the learning experience along with administrative and leadership issues. They put forward an action plan as to how to implement Blended Learning. The authors finally concluded saying that Blended Learning has the proven potential to enhance both the effectiveness and efficiency of meaningful learning experiences in higher education.

Cook, Owston and Garrison (2004) in their report entitled *“Blended Learning Practices at COHERE Universities”* carried out a project of case studies that examined Blended Learning practices at eight Canadian universities. Here the research questions explored the type of Blended Learning strategies and pedagogical approaches, how instructors and students viewed Blended Learning, how the Blended Learning experience compared to traditional formats, and what policy and support issues emerged from the use of Blended Learning in university courses. Result of the study showed that on average, 61% of students agreed that they would take another Blended Learning course, 12% indicated that they would

not, and 27% said that they were unsure. The authors finally concluded that instructors blended their courses to put together a more flexible, efficient, accessible and varied learning experience for their students still student satisfaction seems highly dependent on the level of interaction with instructors and with other students.

Graham (2004) in his article entitled *“Blended Learning Systems: Definition, Current Trends, and Future Directions”* gave a concept of Blended Learning, with background and definitions, discussed what is being blend. He discussed about the current issues related to Blended Learning and the reason behind this blend. Also he discussed Blended Learning at different organizational levels like activity level, course level, program level and institutional level. Challenges in regard to introducing Blended Learning are identified as the role of live interaction, the role of learner choice and self regulation, models for support and training, finding balance between innovation and production, cultural adaptation, and dealing with the digital divide. The author finally concluded with future prospects of Blended Learning by identify successful models of Blended Learning that can be adapted to work in contexts.

Thorne (2003) in his book named *“Blended Learning: How to Integrate Online and Traditional Learning”* discussed about using Blended Learning as an opportunity to recognize talent, harness potential, push the boundaries of personal development, and providing learning. The author provided some practical examples as to how to integrate online learning with traditional learning. One of the key requirements in the implementation of Blended Learning is to keep an open mind and to focus on the learning experience. The book also helped to address some questions regarding the issue of introducing Blended Learning in an organization. The author discussed here case studies from organizations that have successfully implemented, or that are working towards implementing, blended solutions.

2.1.2 National Studies

Cutrell, Neill, Bala, and others (2015) in their article entitled “*Blended Learning in Indian Colleges with Massively Empowered Classroom*” described a Blended Learning initiative that combines videos from a large online course with peer-led sessions for undergraduate technical education in India. The authors of the paper are of the view that students in the developing world were the most important beneficiaries of online education initiatives such as massive open online courses (MOOCs). They opined that blending online and in-person instruction is more likely to succeed in developing regions. The authors wrote about MOOCs, developing countries, and Blended Learning studies in Indian context, technical education in India, problems in pedagogy system, and online education in India. The author developed Massively Empowered Classroom (MEC) to explore online educational content and techniques in Blended Learning to be used for teaching computer science (Design and Analysis of Algorithms (DAA)) at state technical universities in India. Experiment was conducted in colleges affiliated with Visvesvaraya Technological University (VTU), Karnataka. The results showed that a peer-led Blended Learning session once a week for eight weeks in the place of a normal recitation or lab led to a small but significant improvement in learning outcomes as measured in an RCT in Indian technical colleges. Finally the authors concluded by saying that interventions such as this would help to ease some of the serious constraints in higher education in India and other developing regions.

Bansal (2014) in his article entitled “*Blended Learning in Indian Higher Education: Challenges and Strategies*” discussed about the present challenges that is faced by our higher education system which is more so because of new technological wave. So in order to cope up with the challenges, the author here came up with the idea of introducing Blended Learning in higher education institutions in India.

Phatak (2014) in his article entitled “*Adopting MOOCs for Quality Engineering Education in India*” discussed about the present scenario of engineering colleges in India. And how the quality of education could be accelerated is a matter of concern. Here, the author recognised the potential of MOOCs which could offer an unprecedented opportunity to revitalize education. But this too have pitfalls in the context of complete absence of physical group activities and most important mentoring of teachers. So the author came up with the idea of blended MOOC model for adoption in India which would have role for local teachers, using a ‘flipped class-room’ model of teaching along with group discussions and problem solving sessions and laboratory session. The author in this paper mentioned how Blended MOOCs is started being used by IIT Bombay. Finally the author concluded with the very important issue of practical problems in implementing such blended solutions across India, where a stable and continuous availability of high capacity internet bandwidth to engineering colleges, may be difficult to guarantee. So he proposed for a distributed implementation, with a local server in each college, so that the students can continue to work in a LAN environment in case of internet outage.

Astalin (2012) in his article entitled “*Beyond E-Learning and Classrooms: The Blended Learning*” dealt extensively about Blended Learning. The author viewed how technological and pedagogic advances have given rise to many ingredients, which could be included in the blend. As defined by the author Blended Learning is a flexible approach to course design that supports the blending of different times and places for learning, offering some of the conveniences of fully online courses without the complete loss of face-to-face contact. The author discussed the elements and characteristics of Blended Learning procedure and why blended learning is important, advantage and disadvantage of Blended Learning. Finally the author concluded by suggesting for further research in context of

students response and success rate after using Blended Learning in comparison to traditional and e-learning.

Nozawa (2011) in his article named *“To Moodle or not to Moodle: Can It Be an Ideal e-Learning Environment?”* discussed about Moodle (Modular Object-Oriented Dynamic Learning Environment) a popular course or content management system (CMS). It's a free, open source software package designed using sound pedagogical principles, to help both educators and researchers create effective online learning communities because the author has found it essential in a Blended Learning situation which helps to promote active learning for students. The author discussed the pros and cons of demonstrating the basic functions of Moodle. Here it is pointed out that Moodle itself does not promote learning or teaching on its own, its effectiveness definitely lies in the way of teachers' active and interactive participation.

2.2 LIS EDUCATION

According to **Singh (2000)**, the growth of library profession is influenced by the growth of library and information science education, for it is the education and training that gives direction to the profession. LIS education is one of the changing fields in higher education today, with technology penetrating the information field in a big way. There are two ways of meeting the new expectations of LIS education one is to evolve curriculum and other is methods of instruction. So far curriculum has been re-designed to cater for emerging issues and trends. The quality of LIS education is a matter of concern for all and to accelerate it research has been going on. There are many literatures on LIS education both in Indian context as well as in abroad.

2.2.1 International Studies

Virkus (2012) presented a paper on “*Challenges of Library and Information Science (LIS) Education*” where he discussed how new trends are changing the shape of education and how these are challenging the field of LIS education also. The paper studies the Institute of Information Studies of Tallinn University and how they respond to some of these challenges. The author in this paper identified the trends which are shaping education of today like dynamics of globalisation, evolving social challenges, changing world of work, transformation of childhood and ICT: the next generation. The author here pointed out the issues persistent in LIS education like the core curriculum, organizational change, development of ICTs, new pedagogical approaches, collaboration and partnership, match to the labour market and societal needs, the relationship between theory and practice, etc. The author said that the curriculum is the best barometer to reflect the changes and challenges we face today along with the use of digital technologies to improve quality, access and equity in education and shape LIS professionals for future.

Gadagin(2012) in his paper entitled “*Workplace Learning : A New Technique For Continuing Education To LIS Professionals In Knowledge Society*” focused on the role that workplace learning plays in the continuing education of LIS professionals.

Amin and Abdullah (2011) in their article entitled “*Synchronous and Asynchronous Interaction between Librarians and Library Customers: Where Are We Heading?*” discussed various techniques of synchronous and asynchronous interaction used by the library and elaborates their benefits and limitations. The research has been conducted on the integration of digital library services in Blended Learning environments from a Malaysian higher education perspective i.e. International Islamic University Malaysia (IIUM). The authors developed a model to illustrate this phenomenon based on the IIUM Library experience which could help librarians in decision making and finding

best practices to choose appropriate types of synchronous and/or asynchronous interaction techniques that serve their customers best and ultimately suit their respective institutions' teaching and learning.

Alimohammadi and Jamali (2011) in their article entitled "*Common Problems of Library and Information Science Education in Asian Developing Countries: A Review Article*" enumerated and discussed some of the common problems of LIS education in developing countries of Asia and suggested for solutions. The authors viewed that the Asian developing countries share similar issues related to social, economic and cultural elements and they have similar problems in LIS education. Finally they gave some solutions for all like setting up limited number of independent LIS schools, establishing accreditation agencies, flexibility in educational systems, emphasis on research, developing in-service training, equipping the departments with new facilities, employing skilful staff, encouraging collaboration among faculty members and departments, diversifying courses and degrees, updating syllabi in an ongoing manner, taking advantage of IT, and creating and publishing LIS literature in native language.

Aharony (2011) in his paper entitled "*Library and Information Science Students' Feedback in an Online Course*" analyzed the content of the messages expressed by LIS students in online courses taught in Israel as feedback so to understand the themes being articulated by LIS university and college students, also to see if there is any difference between the themes of LIS university students and those of LIS college students as revealed in their feedback. The study revealed that major theme expressed was students' personal impression of their online experience, followed by the reflection category and the collaboration one. The author finally came to the point that LIS university students are more satisfied with their online learning experience and that LIS university students

discuss and express more reflective, analytic meta-cognitive aspects of the learning process than their LIS college counterparts.

Chow and others (2011) in their article entitled *“Changing Times and Requirements: Implications for LIS Education”* presented their study to identify how library and information educators are refining curricula to ensure students are learning the knowledge and skills necessary to work in our rapidly changing field. This study, utilizing a mixed-method approach, interviewed and surveyed over 100 participants from a broad cross section of graduates, employers, senior administrators, faculty, and students at a library and information science/studies (LIS) department in a mid-size university in the south eastern United States. The results suggested a continued tension between teaching library and information science curricula, the continued importance and value of accreditation, the need for closer relationships with employers, and emphasis on courses that teach both technical and intellectual content especially in the areas of communications and customer service within the context of library and information science. The major significance of this study was a rich, descriptive overview of how one LIS department is dealing with the changing field and expectations from its diverse constituents.

Fontanin (2010) in his article entitled *“E-learning Contribution To The Building Of A Multi Generational Workplace Learning Community In An Academic Library: Observations Drawn From Practice”* puts his ideas from a practical experience at the Library System of the University of Trieste (Italy). The aim of the study was to improve the quality of staff training by means of the University Learning Management System, and to build, through Blended Learning a community of practice among staff with different educational levels and backgrounds. The study results showed that blended workplace instruction could actually be an asset when trying to build cohesion among a

multigenerational workforce. The author finally concluded with the advantage of blended courses where participants were given a place where they could meet and discuss their ideas for a longer period of time and they could put into practice what they learned in theory.

Chowdhury and Chowdhury (2006) in their paper entitled "*E-learning Support for LIS Education in UK*" discussed about the initial findings of a project named eLLIS project funded by the Higher Education Academy (HAE) Subject Network Development. The aim of the project was to study the current practices and support for e-learning available in the Library and Information Science departments in UK. The paper gave a reflection of current status as the project was on going at that time. The findings of the paper showed that all the LIS departments and the corresponding university libraries provide e-learning, though the nature of these support services varies significantly. It was seen that most of the LIS departments in UK offered a Blended Learning environment i.e. a combination of traditional and e-learning facilities. The author finally concluded by suggesting for study on how the LIS students perceive and use the current level of e-learning services available to them.

Ebrahimi (2009) in his paper named "*The Effect of Information and Communications Technology (ICT) on Teaching Library and Information Science*" examined the role of IT and ICT in education, and ways that they can improve LIS instruction. The author is of the view that Iranian LIS programmes need more use of technology and an examination of methods of delivering instruction also that the entrance of IT and ICT into LIS has led to review of educational programmes and teaching methods. The author concluded by saying that if LIS education is to incorporate IT and ICT into teaching then it is necessary to educate teachers, possibly by using foreign professors and/or other methods, then only they can educate librarians who can prove their benefit to

the society by being in step with changes and advances in technology, economy, society, and culture.

Ogunsola (2005) in his paper entitled *“Information and Communication Technologies and the Effects of Globalization: Twenty-First Century “Digital Slavery” for Developing Countries--Myth or Reality?”* examined the ICT (Information and Communication Technology) revolution and the concept of globalization as they effect developing countries. The wide gap in availability and use of ICTs across the world and the influences ICTs exert on globalization at the expense of developing countries were also carefully examined. Information Communication Technology is basically an electronic based system of information transmission, reception, processing and retrieval, which has drastically changed the way we think, the way we live and the environment in which we live. The global information communication has been called "the world's largest machine," and it is very complex and difficult to visualize and understand in its different hardware and software subsystems. ICTs are increasingly playing an important role in organizations and in society's ability to produce, access, adapt and apply information. They are being heralded as the tools for the post-industrial age, and the foundations for a knowledge economy, due to their ability to facilitate the transfer and acquisition of knowledge.

2.2.2 National Studies

Rao (2014) in his article entitled *“Use of Multimedia and E-Learning in Libraries-A Global Scenario”* first discussed about the multimedia and how it was being used in libraries for better services. Secondly the author discussed here about e learning, its need in LIS education, benefits and major challenges. The author also covered new trends in the e-learning like Blended Learning. Lastly the author provided summary of LIS education in

the development of e-learning and viewed that e-learning will continue to grow in our organizations.

Pujar and Bansode (2014) in their article entitled “*MOOCs and LIS education: A Massive Opportunity Or Challenge*” discussed about the Massive Open Online Courses (MOOCs) and how this is making a revolution in higher education and how this is effecting students, teachers and subjects like LIS. The author reflected on the areas of concept and key players of MOOCs, LIS education, and how this new means of learning can be best utilised in LIS education. Therefore the author listed out some areas and also what impact it had done to LIS education.

Shrawan (2014) in his article entitled “*Library and information Science education in India*” discussed about the library science schools in India before and after independence. The author mentioned about the teaching methods and teaching aids and how it got changed with time and technology. The author viewed that the curriculum model of LIS education by UGC in 2001 needs to be revised keeping the technological and job scenario challenges.

Dakhole (2014) in his article entitled “*Education in Library and Information Science in India: A Review*” reviewed of education in Library and Information Science in India and also reflected on the growth and development of the subject. Here the level of LIS education is discussed with course content. Lastly the author discussed the suggestions forwarded by the professional expert and governmental committees.

Singh and Babbar (2014) in their article entitled “*Doctoral Research in Library and Information Science in India: Trends and Issues*” gave a picture of doctoral research carried out by various LIS departments of India. The authors reflected on the importance of research. Scenario of LIS education in India was also discussed giving information on LIS research. The study covered period of 63 years, starting from 1950 when the first PhD was

awarded till 2012. Also the emerging areas of research are mentioned in this paper. Lastly the authors concluded with the findings that the number of PhD in LIS education has been seen growing decade after decade as the young professionals are more interested in research in this area along with the department having qualified research guides and also due to the UGC's condition of PhD qualification for higher position for departments and also library. The authors suggested for national body to monitor the research in LIS so that the standard and growth can be regulated. The authors also pointed out a very important issue regarding National Knowledge Commission's proposal for Indian Institute of Library and Information Science which was aimed to control research in LIS that neither it came up nor implemented till date, which needs serious concern.

Siddiqui and Walia (2013) in their paper named "*A Comparative Analysis of Library and Information Science Post Graduate Education in India and UK*" gave a comprehensive status of library and information science post graduate courses in India and UK. Ten LIS schools from India and UK have been surveyed here. Through this paper the authors tried to show the face of the LIS courses being taught at Master's Level both in India and UK, along with the need for updating it keeping in view the present society and technological revolution. Lastly they concluded reflecting on the need of having standardization and accreditation council exclusively for LIS education system in India.

Chakraborty and Goswami (2012) in their article "*The Present Scenario of LIS Education in West Bengal of India: At A Glance*" tried to give a picture of the present scenario of LIS education in West Bengal. Through this paper, the curricular structure and infrastructural facility of LIS Education in West Bengal has been shown. Eight universities of West Bengal were taken into study. Finally they concluded with few suggestions like LIS education must be well planned and should be developed with a more realistic manner

also that the scope and coverage of LIS education should be at par with national and global standard.

Mazumdar (2012) in his article *“Information and Communication Technology and Its impact on Open and Distance Learning”* discussed about the education system and the wide application of IT tools and techniques. The author viewed that through the IT enabled open and distance learning education system one can get his or her desired education just with a click away and the rapid use of internet and other communication facilities have brought the open and distance education closer to the student community. In Assam both the leading state universities i.e. Gauhati University and Dibrugarh University are providing distance education under their Directorate of Distance Education. Krishna Kanta Handqui State Open University (KKHSOU), the first state Open University of the North East Region of India has been established in 2006 and it started its academic programme from January, 2008. Now the Tezpur University, one of the central universities of Assam also has decided to start the distance education programme under the Directorate of Distance Education in 2011.

Bhongade, Kude and Bharambe (2012) in their paper entitled *“Role of Library Professionals in Present ICT Era”* studied that the library professional should increase their skills to provide good access in Information and Communication Technologies. The study revealed the prospects and opportunities to cope with the changes in Library world from traditional to digital environment. It has identified the central role of library professional, in the organization and dissemination of information, striking a balance of physical and virtual realms

Baskaran, Babu and Gopalakrishnan (2012) in their paper entitled *“Information Skills of Library and Information Science Students: A Survey in Kerela”* provided an overview of ICT skills, information search skills and soft skills possessed by the LIS students, and LIS education in Kerela.

Bansode and Kumbhar (2012) in their article entitled “*E-learning Experience Using Open Source Software: Moodle*” presented the use of Moodle, an open source software by the Department of Library and Information Science, University of Pune. It was done for the promotion of e-learning in the department. The authors here reflected on different utilities of the Moodle such as development of the course, blogs, wiki, question banks, notification to the students, etc. The paper revealed the practical experience of designing, development and implementation of e-learning course for the ‘Information Technology’ paper of the MLISc curriculum.

Mathew (2011) in his thesis paper entitled “*Impact of Information Communication Technology (ICT) on Professional Development and Educational Needs of Library Professionals in the Universities of Kerala*” conducted a study to know whether the developments in information communication technologies have any influence on the library professionals’ professional development, and the need for further education and training in the profession and evaluate their skills in handling developments in ICT. The researcher viewed that in a changing environment when most of the library services are ICT based, it is important for library professionals to be well informed and updated regarding developments in ICT. The thesis dealt with different studies regarding the use of ICT based applications by library professionals, their attitudes towards ICT, skills in handling new technologies, need for training in the new technologies etc.

Jain, Kaur and Babbar (2007) in their paper entitled “*LIS Education in India: Challenges for Students and Professionals in the Digital Age*” discussed about Library and Information Science (LIS) education and LIS professionals in India. Currently both the traditional libraries and the digital libraries coexist in India. Here they revealed that LIS education in India have not become receptive to the new emerging situation. Also the paper reflected on the challenges in LIS education in the Indian context. The authors viewed on the recent emphasis given on e-learning in LIS education in India, the impact of

LIS education on the work and career of graduates, the job market for LIS professionals, competencies needed and continuing professional development of LIS professionals.

Kumar and Sharma (2010) in their paper entitled *“Library and Information Science Education in India: A Historical Perspective”* discussed the historical perspective of Library and Information Science (LIS) education in India, and traces the growth and development of the subject. The discipline got recognition with the introduction of various courses at the university level. They are of the view that Library science need to change according to the needs of the time. Also they pointed out that the recommendations made by National Knowledge Commission for reforms and changes in the educational system needs to have some important concern on our part.

Panigrahi (2010) in his paper *“Library and Information Science Education in East and North-East India: Retrospect and Prospects”* discussed the LIS Education in East and North-Eastern India covering eight states of North-Eastern India, Orissa, and West Bengal. The author here discussed the levels of courses offered by universities and/or other organisations, admission requirements, course content, course delivery, teaching methods, availability of infrastructural facilities, employability, etc. Glorious history of LIS education in these states has been traced and recorded which presents development and trends. It was found that West Bengal, for the first time introduced LIS education in Eastern and NE India. Lastly the author concluded with suggestion that Ministry of Human Resource Development in close coordination with UGC and NAAC should think of establishing a National Accreditation Council exclusively in library and information science to ensure qualitative development of library and information science education.

Varalakshmi (2010) in her paper entitled *“Library and Information Science Education in South India: Perspective and Challenges”* presented an overview of LIS education in South India. Here the author analysed the existing programmes of the 27 LIS

departments to meet the growing demand for competent manpower. The author viewed that the efforts of the departments in South Indian Universities are significant but insufficient and it is found that curricula of MS (LIS) programme of DRTC, Bengaluru, is outstanding with balanced emphasis on all aspects. Also gave suggestion for LIS departments to produce the expected kind of professionals.

Kaur and Walia (2010) in their article entitled *“Library and Information Science Education in Chhattisgarh and Madhya Pradesh”* provided a picture of LIS education in the regions of central India which covers states of Chhattisgarh and Madhya Pradesh. Six universities imparting LIS education were studied in this paper. The study revealed that most of the universities still did not adopt the two year integrated MLISc course for LIS education as mentioned by the UGC as a model curriculum. The authors suggested for computer laboratories for the students so that they can develop their skills in ICT and also internship programme for the students.

Joshi (2010) through his article entitled *“Library and Information Science Education in India: Some Government Initiatives”* revealed the various initiatives taken by Government of India in respect of LIS education in India. In the beginning the author mentioned about different initiatives which were taken for higher education in India like Radhakrishnan Commission; Kothari Commission; National Policy on Education-1968, 1986, 1992; National Knowledge Commission, UGC, NAAC, DEC. In regard to the LIS education there were many initiatives taken by government like Advisory Committee for Libraries; Working Group of Planning Commission; National Policy on Library and Information System, etc were mainly discussed here by the author. The author also discussed the Library Committee; Review Committee and the two Curriculum Development Committees which had a huge hand for the present state of LIS education in India.

Gokhale (2010) in her paper entitled *“Library and Information Science Education in Maharashtra: A Perspective”* discussed about the LIS education of the state of Maharashtra in details. The author first discussed about the landmarks of Indian LIS education, then research in LIS education and then discussed about the LIS education in Maharashtra which are given through regular mode. Distance learning and vernacular media courses were not covered in this paper. The author discussed the programmes, structure of the courses, teaching methods, research, admissions, and variations in imparting the education. The author suggested for e-Learning mode and Virtual Learning Environment (VLE) for library schools to seriously prepare themselves.

Walia (2010) in her article entitled *“Library and Information Science Education in North India”* covered briefly the history and development of the LIS education in India with special reference to North India. The author reflected on the emergence, trends, status, different patterns, and levels of LIS education in the States and Union Territories in the northern region of India.

Tripathi and Jeevan (2010) in their article entitled *“e-Learning Library and Information Science: A Pragmatic View for India”* discussed about e-learning which includes electronic applications like web-based learning, computer-based learning, virtual classrooms, and digital collaboration for teaching and learning. Here the authors reflected on the steps as to how library and information science schools should follow in designing and implementing e-learning like need and demand analysis for online programme, courses and credits of the programme, intended audience, hardware and software requirements, internet access, cost, institutional mindset, assessment and awarding marks or grading, selection of learning management software or virtual learning environment, orientation and user awareness programmes, staff training and development, evaluation, maintenance of

the system. Lastly, problems related to e-learning from three different perspectives are also discussed.

Dhiman (2010) in his article entitled *“Evolving Roles of Library & Information Centres in E-Learning Environment”* discussed the evolving roles of library and information centres in e-learning and online learning environment. The author viewed that with the advancement of ICT, new method for teaching and acquiring knowledge came up in the form of e-learning and online learning and this change also led to change in the libraries’ role as information literacy trainers, experts in organizing and providing access to online resources, content providers through digitization projects and providers of print resources for learners.

Lalngaizuali (2010) in her thesis conducted a survey on *“Library and Information Science Education in North East Region: A Critical Study”* She had done a comprehensive study on the four universities offering LIS courses in North East Region. In the changing information scenario, a critical and in-depth study of library and information science education especially in North Eastern Region is highly welcomed by library and information science educators, practitioners and future perspective students desiring to enrol in library and information science.

Singh and Devi (2009) in their article entitled *“Virtual Learning Environment: Issues and Challenges before LIS Schools and Libraries”* discussed the impact of the globalization and ICT revolution on LIS education and how Virtual Learning Environment (VLE) has become essential to consider its utilization in the LIS education. The author here reflected on the VLE concept, Virtual Community, characteristic, features, objectives, issues, LIS Education in VLE, emphasizes on the American experience, IGNOU initiatives in India. Lastly, concluded with the suggestion that Indian LIS Schools should adopt virtual learning system so that proper utilization of educational technology for imparting courses can done and which would in turn produce better results.

Chakraborty and Sarkhel (2009) in their article entitled “*LIS education in India: an appraisal of the parity between the syllabus and the market demands*” discussed different modes of LIS training that have been delved into namely, regular courses offered by the universities, specialized courses by NISCAIR (INSDOC), DRTC, NCSI, etc., distance education LIS courses offered by open as well as regular universities and also the certificate course offered by BLA and some other organizations. Their study tried to map the resources (input) used for teaching LIS by comparing syllabuses of different Universities and Institutes and how far these resources co-relate in imparting LIS education with the today’s market demand for LIS professionals. The basic issues to be addressed in this paper are the connectivity between uniting LIS education and manpower requirements to transform India of the 21st century into a knowledge society, as envisaged by the National Knowledge Commission (NKC). It has emphasized on standards and excellence in LIS education in the light of the country’s manpower requirement.

Gokhale and Chandra (2009) in their article named “*Web 2.0 and E-Learning: The Indian Perspective*” discussed Web 2.0, e-Learning 2.0, the Library 2.0 environment and LIS education. The author viewed that web 2.0 played a big role in education which has shifted according to time and technology and in the way it is imparted. It is seen that the Web 2.0 technologies have enabled higher order skills of analysis, synthesis, and evaluation resulting in new terms like e-learning 2.0 and Library 2.0 which has created wide scale implications for the library and its services. The author is of the view that right implementation of ICTs can help to solve number of problems related to the Indian education scenario.

Srivastava (2009) in his article entitled “*Web 2.0 in LIS Curriculum: A Preliminary Study*” discussed the web 2.0 and its application and tools which are used in

libraries. The author viewed that librarians are struggling everyday to keep themselves up to-date with new Web 2.0 resources and utilities, to implement the same in their personal and professional work domains and hence expect the fresh graduates to be skilled with requisite technical competency to meet the challenges of the growing market demands. Through the study it was felt that a holistic approach towards personal and professional uses of Web 2.0 applications and tools is the need of the hour.

Kumbhar (2009) in his paper “*Use of E-learning in Library and Information Science Education*” discussed the initiatives of e-learning in LIS. It defines e-learning and its characteristics, and describes the tools of e-learning. The paper also compared the traditional education with e-learning and states how both these methods complement each other. It also discussed about Blended Learning.

Pujar and Kamat (2009) in their paper entitled “*Libraries—a Key to Harness E-Learning: Issues and Perspective*” presented the role of LIS professionals in the e-learning method. After the analysis of the e-learning scenario, authors viewed that libraries and librarians have an important role to play possibly through the digital libraries—a contemporary movement growing along-with the e-learning. Here they discussed e learning and library linkages and the innovations implemented in the top ranking public libraries which the Indian LIS community can follow. The paper reflected on the strong bond that e-learning and library share and which is beneficial to both for their growth.

Patkar (2009) in his article entitled “*E-Learning: Liberation of Education and Training with Evolving Library and Technology Support*” discussed e-Learning and library transformation process. The author reflected on the impacts of e-Learning on the learner, teacher, and library using the framework of the laws of media enunciated by Marshall McLuhan. The author further discussed the importance of e-Learning and new form of the library which promotes the concept of self-service society. Finally the author concluded

with the recommendation of promoting the e-learning aided by the advanced library and technology so that it can help in the spread of the modern education to the remote corners of India.

Srivastava (2009) in his paper *“Redefining Library and Information Science Education (LIS) in an IT (Information Technology) Environment”* covered a brief account of present position of LIS education in India. He gave emphasis in redefining LIS education in an IT environment. Finally the author recommended for central accrediting body to be established for LIS education in India. He traced out that absence of central accrediting body leads to inconsistency in course contents, examination system, infrastructure, admission criteria, designation and pay scale of library professionals and duration of courses etc. He further mentioned that LIS education must be established on the lines of AICTE and MCI. He also viewed the need to establish central training council for LIS teachers, National Council of Library and Information Science Education and Training (NCLISSET) on the lines of NCERT. Lastly he wrote about the need to increase the quality of distance education in LIS.

Tella and Adu (2009) in their paper entitled *“Information communication technology (ICT) and curriculum development: the challenges for education for sustainable development”* has discussed how technological change has become a most stable factor and how ICT has intertwined with knowledge, making it dependent upon the technology. The author revealed that despite knowing the awesome impact of ICT on education, many teachers still adopt a ‘teacher-centred’ approach and do not know how to apply IT into their subjects. It was noted that in the process of building and developing curriculum through the use ICT there are bound to be challenges. Finally the author provided answer to all these pertinent questions.

Satija (2009) in his paper "*LIS Education: Some Rambling Questions*" discussed some major concerns of higher education administration like expansion of higher education; faculty recruitment, development and retention; students welfare; finance and infrastructure provision; constant re-orientation to social needs; creation and ensuring the availability of needed learning and teaching resources. All of these factors are intertwined and need synergic development.

Kumar (2008) in his article "*Internet, Library and Information Science Education*" conducted a study on the Internet and its consequences in the field of LIS education. He mentioned that Internet is one of the tools of IT. It had a dramatic effect on the whole approach to teaching-learning process at many universities in the West especially Harvard University (USA). In this paper he wrote about the impact of IT on libraries. He also wrote about the role of Library schools and their survival and also mentioned that the library scene is changing rapidly. Thus Kumar said that library schools should aim at attracting bright teachers, who are already leaders of profession or possess the potentiality to become so and deliver the goods and emphasis should be on training students in handling IT to provide modernised library services.

Kumar and Sharma (2008) in their paper entitled "*Blogging : A Teaching Tool in Library Education*" sketched the concept of blog, its kinds, salient features, other related technologies, advantages and effects of using blogs and its usage as an effective teaching tool of education , particularly in LIS education.

Padmamma (2008) in his article entitled "*Shifting of LIS Education towards Information & Communication Technology in Universities of Karnataka State: A Study*" discussed about LIS education and ICT in general and universities of Karnataka in particular. He viewed that the conventional user education programmes need be redefined and reengineered with more emphasis on ICT so that the user can easily locate desired

information. The author gave an overview of current status, the different patterns and levels of LIS education and impact of ICT on LIS Education Development. The author mentioned about the need for a national level accreditation body to maintain uniformity and standards in LIS education and finally suggested to work on the problems related to LIS education because the empowerment of library and information professionals with IT skills is aimed at providing services that are expected of from the clientele in the new environment.

Panda and Behera (2008) conducted a study on distant learning in their paper named “*Current Status of LIS Education in Distant Mode: An Indian Experiment*” They discussed the potential and actual role of distance learning in library and information science which would bring students, teachers, researchers, and many other people from wide spread location for live interaction. It provided an opportunity for career development to the working librarians and information personnel. They explained the concept of distance education, its objectives, characteristics and status of LIS education in India through distant mode.

Ijari (2008) in his article “*Library and Information Science Education Through Open University System*” conducted a study on Open University System in context with LIS education. He viewed that the idea of Distance Education (DE) was introduced by United States and this concept influenced India as well. On the basis of the recommendations of various committees and commissions the Govt of India recommended to the state govt and UGC to start DE courses in different disciplines. He mentioned about the emergence of DE in LIS education. He identified several salient features of Open University Programmes, limitations and suggestions.

Babu (2008) in his article entitled “*Refresher Courses in LIS as a Means Of Continuing Education Programme: Some Observation*” discussed the potential and actual

role played by the Continuing Education (CE) programmes in order to meet the new challenges in LIS courses. Refresher courses are one of the modes of CE which are aimed at developing one's career. He mentioned about the objectives, genesis, nature of refresher courses, list of universities that conduct refresher courses in LIS, and suggestions.

Sinha (2008) in his paper *“Information Communication Technology (ICT) and Internet Awareness Amongst the College and University Teachers”* discussed ICT, Internet and brief account of the status of Higher Education in India, role of UGC in imparting quality education, and Refresher and Orientation Courses being offered by the Academic Colleges of India with special reference to Himachal Pradesh University, Shimla.

Asundi and Karisiddappa (2007) in their article entitled *“Library and Information Science Education in India: International Perspectives with Special Reference to Developing Countries”* discussed the profile and contribution of LIS education in India. The authors reflected on the genesis and growth, UGC efforts, role of professional bodies and other agencies, levels of courses in LIS in India, distance education in LIS in India, curriculum development and research growth, infrastructure and other physical facilities, IT in LIS education. Here the authors discussed LIS education's international potentiality and perspective scenario in context to developing countries.

Ramesha and Babu (2007) in their article entitled *“Trends, Challenges and Future of Library and Information Science Education in India”* discussed the challenges LIS education faces in the 21st century and also suggested for more on ICT skills so that LIS education becomes more relevant and effective. Here the authors reflected on LIS trends, LIS issues, LIS challenges, future of LIS education.

Varalakshmi (2007) in his article entitled *“Need for National Consensus on Library and Information Science Education in India”* reviewed the growth of LIS education in India, discussed the future trends and suggested for national consensus on

some of the basic issues like levels of LIS education, core curriculum, teaching techniques, admission, accreditation and collaboration. The author concluded with the remarks to build library education programmes that reaffirm the historic role of university departments along with the adoption of different strategies to reinvigorate the LIS education.

Chatterjee (2006) presents a background on the LIS education in India in context with Ranganathan in his paper named "*Ranganathan and LIS Education in India*" He discussed the contribution of Ranganathan as a teacher. The author described Ranganathan's teachings something which served like "an alchemy, which turns raw material into gold." The author sketched the progress of implementation of Ranganathan's ideals of LIS education and how far we have drifted apart from some of his ideals and if so is that for better or worse.

Dutta and Das (2001) presented a paper on "*Higher Education in Library and Information Science in India*" where universities and colleges providing postgraduate LIS education in Indian through regular and distance mode were discussed. They tried to present the traditional Indian scenario as well as present position of LIS education in Indian Universities.

2.3 CONCLUSION

Literature review is a key process which helps the researcher to guide on areas where related work has been done and what next to be done. The study has covered the above mentioned literature survey in addition to primary and secondary sources. Though a huge amount of literature is available on Blended Learning and LIS education in different forms, it is to be mentioned here that due to various aspects like usefulness towards the present study, it has been a huge task to bring into focus all the available literature on the topic. However those materials like books and journals which are relevant to the present study have been reviewed. The reviewed literature presented carry both printed and e-resource

materials. Besides these, the researcher has consulted various reference books like dictionaries, encyclopaedias, books on research methodologies, to gather ideas or to find the meaning of significant terms. From this review of literature, it is quite evident that systematic study on awareness towards Blended Learning as method teaching of LIS education in North East India or in any part of India has not been undertaken. Therefore an attempt has been made to study on this area, which has been brought into forthcoming chapters.