## **CHAPTER-II**

# LITERATURE REVIEW

#### 2.1. Introduction:-

Past literature is the mirror of present and future research which helps to develop a thorough understanding and insight into previous research works that relates to the present study, the study of the previous research findings gives a hint to the budding area of fresh research. Literature Review is an essential in order to aware of the aspect involved in college libraries. It is an important tool for the study. Here primary and secondary sources of information are consulted to know the line of the research work. A large number of literature being published on college libraries and relating to the topic "Role of College Libraries in a Changing Information Context for Promoting Higher Education in Assam with Special Reference to Lakhimpur District – A Study". The topic under study is a very significant one and there seems to be considerable literature available on "Information Technology" and its impact on college libraries. This chapter focuses on previously published scholarly literature relevant to this study. Specifically, the study attempted to examine the literature on the following sub topics:

- 1. ICT Application in College /Academic Libraries/
- 2. Library Professional & Training

### 2.2. ICT APPLICATION IN COLLEGE / ACCADEMIC LIBRARIES:-

Patel, K. Naresh and Jain Rajanikant (2015) entitled their paper, "Higher education quality improvement through linkages". They pointed out in their papers that education has always been considered as means of improvement of a person of the quality of life and the society in general- through in varying degrees in different societies. They mentioned that challenges come to education system. Challenges in the education are many like employability, quality man power, resources and many more. To overcome this problem they suggested some measure; do forward integration among students, parents, promoters and stakeholders, promoters of education and industry.

Maheshwari, Amrita (2014) the author entitled her paper, "Role of higher education in creation of knowledge society". She pointed out that education is the best thing that can happen in one's life. It should teach us humanity and benevolence and clarity of mind and purpose. It is true that education has a greatest role in contributing to our nation's future in terms of growth, prosperity, social equality and the true realization of our large talent pool. That present era is the knowledge having emphasis on the knowledge, learning and education. Knowledge has synonym to power. She mentioned that the world is changing rapidly as technological advances have become faster and more dynamics. Rapid advance in technological awareness, growing importance of the international business and increase recognition and expectations of the individual play a crucial role in the knowledge economic. The world is experiencing knowledge explosion and clear international awareness is visible on knowledge society.

Kumar, Rajendra (2013) focused and recognized about various component of ICT which are used in libraries and information system. The study identifies correct reasons to use computer and its related technologies in libraries. It also explained the role, impact, and challenge of information communication technology based library system.

Bendkar, Y (2013) in his paper discussed the role of ICT in libraries and range of issues associated to ICT in library in current days, rapidly developing ICT is generating new prospects and challenges for conventional libraries. The latest trend globe over is to move on the way to digital collection. Present libraries are actively digitizing their conventional collection of the libraries and planning for online acquisition subscription.

Lal, Bansi (2013) focused education in emerging Indian society. This is one of the valuable reference books, where the Author depicts past and the present scenario of education system in India. He pointed out that the Nalanda University was the oldest University system of education in the world. India improved education system is often cited as one of the main contributors to the economic rise of India. The author explained that higher education is the main thing for development of the society. However India continues to face stern challenges and problems despite growing investment in education sector.

Hussain, Akhtar (2013) explained in his book, today is an information age and a tremendous flow of information is emerging in all fields throughout the world. As such, it has become very difficult to manage the information manually due to the exponential growth of literature. The author proves that traditional way of handling method has become almost ineffective. To overcome this problem, the Libraries, Resource Centers

and Documentation Centers ought to change their attitude towards information handling. The user community is also expected to change their methodology, attitude and approach to information searching. So ICT based information handling is a valuable solution in present context. Recent technological developments such as explosive growth of Internet and WWW, Sophisticated search engines, fast processing power and reducing cost of the computers, high bandwidth networks and increasing number of electronic publications assist the libraries in providing extensive access to the variety of information sources and provide a variety of information sources and provide a way to enrich the teaching and learning environment. The growth and development of ICT have made significant impact on library and information services.

Khan, N. B. R. (2013) explained ICT and its use in information science, how digital libraries are usually progressing for e-documents sharing and also informed that how digital library has the capability to make information available 24 hours with distant access to accomplish the user needs.

Chouhan, D. S. (2013) discussed about impact of ICT in rural India and how technologies could be shared with the common mass through digital technology. The paper also compares the proposed Gram E-Library which will be implemented through Gram Kiosks with the existing approaches

Sinha, Bhattachayee (2013) in their recent study of college library users of Barak Valley showed that users feel electronic documents are very useful and they find difficulties in reading them due to lack of ICT infrastructure.

Karmbelkar, Manjiri, Dhamddere, Sangeeta, Phunger Prakash & Dahibhate, N.B (2012) highlights the impact of e –learning over the academic colleges libraries and the challenges faced by the college libraries. E-learning and E – publishing go hand in hand and there is a need to find how libraries could support to this change. The paper is also review E-learning and E-publishing. There is a need to find how libraries could support to this change. This paper also reviewed e-learning need, demand of readers for e-learning, training for users, tool and techniques, support from the college libraries and also discussed best practices e-learning.

Satpathy, Sunil Kumar and Maharana, Rabindra, K (2012) in their article 3main result of the survey, brings to a close with the comments that in the era of information communication technology, the weight of information communication technology

based library services cannot be unseen hence cannot be belated. The maximum use of information communication technology based library services will enhance the teaching and learning process of Odessa's engineering college

Vijayakumar, A. and Thomas, jaisan (2012) stated that "The role of libraries is very important in encouraging the development of knowledge, the main component of any learning institution. Library is connected with all technical and academic institution which is spin of teaching learning system. Libraries of colleges play an important role in providing in general library and information services to the students or its users. Now, we have come into the era and we have lot of challenges before us for keeping us in pace with modern development in IT which have brought information explosion and information up-rising".

Barve, Sunita and Dahibhate, N.B (2012) in their paper overviewed variety of open source software, for libraries. Information technology has participated a major role in libraries. Present library services have been completely depended on computer application. Any computer programs and software are available for libraries to provide range of services from library automation, library website management, knowledge management, digital library management. To manage large amount of digital information, libraries need some computer applications which are developed by commercial vendor or are available as open source license to take care of their requirements.

Pandey, Ravindra (2012) his valuable and popular guide UGC-NET /SET of Library and information science is an important document for a student of Library science and researcher.

Barman, B (2012) has published a book entitled "Library and Information Science, UGC NET Guide- II revised edition' is another valuable document. This is a basic book about library and information science. The author has given a clear conception about the whole syllabus of MLISc Programme and a reliable guide book for qualifying the NET examination. The author has given a clear picture about research. He mentioned that the goal of research is to improve the level of living in society. He also mentioned the meaning, definition of research, needs of research, characteristic of research, types of research, research design, hypothesis of research and the formulation of research topic / proposal.

Pragasam, Arul (2011) conducted a survey at University of Mumbai affiliated engineering college libraries to find out the use of different types of ICT and its impact on the library development .The study revealed that almost all the college libraries are using the ICT and application and bring the benefit to them in the libraries.

Sarmah, Mukut (2011) has focused on his book "IT applications in Academic Libraries of Assam." He mentioned some problems of academic libraries of Assam, present situation, some important recommendations and suggestions to overcome the problems and create a good environmental position. The author mentioned that Information technology (IT) has a great impact on the functioning of all types of libraries. The services of academic libraries also have been drastically changed due to the impact of IT to serve its academic community. He clearly mentioned that the traditional way of information handling methods has been almost ineffective and inefficient in providing required information to the information seekers. There are various prospects in the application of IT in library activities to provide pinpointed, exhaustive and expeditious information from within and outside sources to users in application or on demand. This book presents the result of the research study to have an understanding of the prospects of application of IT in academic libraries in Assam and attitude of library professionals towards IT.

This book may surely help the student, research scholars and library professionals in Assam. It may be a great help for the academic libraries in Assam particularly the college librarians who want to know the prevailing scenario and to be aware about the changes in the services and functions of the libraries after introducing IT in their libraries.

Janakiraman, C (2011) discussed about the necessity of research in Library Science. His book is also one of the important books which provide all essential theoretical and practical information on research in library science. This book is very informative for Researcher, Librarians, Information Scientists, Bibliographers, Document lists, Students of library and information science, systems analysis, etc. Library and Information Science is actually an interdisciplinary subject. Library and information science research activity maintains its historic focus on research that improves information services.

Bhatt, R.K (2011) discussed and examined the growth and development of libraries in India from the time of collection perspective to connectivity environment. In an historical perspective, it studies the evolution of society with its consequent need,

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and hence the cause of rise of the libraries as an important institution for growth and development of human civilization and culture. It examines the works of various author's who have contributed significantly as libraries of India with their academic contributions towards students, teachers and scholars interest in related topics such as history and development of libraries, Resource sharing and networking, library consortia and digital libraries.

Krubu, Dorcas E. & Osawaru, Kingsley E. (2011) studied the impact of ICT in two university libraries of Nigeria and barrier in the efficient and effective employ of the ICT in the libraries activities where the problems come across for the academic libraries while applying ICT in function. He concluded so as to IT has satisfied its assurance in academic libraries; there is considerable growth in the use of IT in libraries rut in tasks such as processing acquisition, storage, revival and dissemination. Information explosion can be control by ICT, they recommended that to provide the ICT infrastructural facilities financial support should be made available. Library staff should be computer literate. Standby generators or power supplemented should be provide for efficient and effective power supply, time to time training of computer and orientation programs should be organized to update the computer skills, orientation programs should be arrange and made compulsory for fresh library professionals and Imported ICT equipment should be tax free.

Zhang, X (2011) his study explored on restructuring and gap up for last three decades in which university libraries have large transforms in the library functioning due to computer technology and networking application. Computer application functional made available in the each field libraries of china undertake onto a new stage of career.

Parvez, Ahmed (2011) concentrated his paper in the direction of the development & modernization of ICT and its implementation in library services. ITs use will create much change in complete library management structure .By the application and development of information communication technology, the libraries have shifted from the conventional to hybrid library, automated library, then digital archives stage, mobile phone services and library 2.0 all these effects of the transform. The operation, structure and management, of libraries have too changed in vibrant manner as in a constant procedure.

Sharma, and Mudhol (2011) discussed the status of college libraries in Karnal (Haryana) pertaining to the library collection, membership, library finance, networking,

automated system, Internet facilities, and other library services provided in these libraries. The study is based on the survey of college libraries located in Haryana and presents the analytical and comparative study of physical infrastructure, ICT facilities, and services.

Kaushik, A; Sharma, S and Rujput, L,S. (2011) in their paper focused in popular open sources software and it is also interface that make it easy for people to create their own library collection. Now days, ICT brought about great opportunities to justify their role in teaching and research work.

Kumar, Arjun Dinesh, and Kaur, Updesh (2010) have indicated that the Information Technology has changed all fields of life. It has also revolutionized the function of academic libraries and to become the rank of the resources of information. Communities search for information for their reference, education, research and help from library. Digital libraries require IT skilled librarians. Librarians are required to organize, acquire, select, and preserve digital collections and make information accessible. Services must be planned, supported and implemented for digital library. Sadly, opportunities for librarians to receive training are currently very less to carry out the responsibilities and task of digital libraries.

Bansal, (2010) in his research paper, which deals with emerging ICT to modernize college libraries, pointed out various applications of ICT in library services to meet user's needs in present scenario. Use of ICT is essential to modernize the libraries. He stated very clearly that ICT is beneficial for mechanization of traditional libraries and all their functions. ICT also helps in strong, preserving, retrieving and disseminating information in economical ways to the users. In his paper he suggested that applications of ICT in college and academic libraries is growing fast and ICT only helps in removing the barriers of information handling. Modernization of libraries is must and for this purpose ICT is the best tool

Sampath, Kumar and Biradar (2010) looked into the use of information technology in 31 Karnataka's academic libraries. It is found that existing position of library automation has suffered due to poor ICT infrastructure, and also librarian's approach in the right direction. Researcher discovered that function of ICT application has not reached very far above the ground level. Be deficient in of skilled, be short of manpower, not have a budget, trained staff and be deficient in provision for on job training are the major limitations for not achieving the goal by these academic libraries.

Arjun, Kumar Dinesh and Kaur Updesh (2010) their papers indicate that the Information technology has changed all fields of life. IT has also revolutionized the function of academic libraries. Academic Libraries begin the tank of the resources of information. Communities search for information for their reference, education, research and help from library. Digital libraries require IT skilled libraries. Librarians are required to organize, acquire, select, make and preserve digital collections and Information accessible. Services must be planned, supported and implemented of digital library. Sadly, opportunities for librarians to receive training are currently very less to carry the responsibilities and task of digital libraries.

Singh, Jagtar and Kaur, Trishanjit (2009) their papers "Future of Academic Libraries in India; Challenges and Opportunities" mentioned that the future of academic libraries is in our own hands. It further emphasis the need for change in academic libraries in the context of the emerging knowledge economy. It also highlights the impact of ICT on and paradigm shift in academic libraries. The Author depicts a clear picture of challenges and opportunities facing the academic libraries.

Tikekar, A.C (2009) the author in his paper "Towards 21<sup>st</sup> Century academic Libraries and Librarianship" discussed the modernization of university and College Libraries in India taken place during the later half of the last century. It gives an account of the contribution of the University Grant Commission (UGC) in terms of reports, conduct of seminars workshops, financial assistance for replenishing collections, constructing library buildings upgrading library services. The role of other national bodies like AIU, AICTE, NAAC and Library Network also described. This modernization facilitated their transformation into the 21<sup>st</sup> century Academic Libraries.

Sharma, Parul, Singh, Mahesh and Kumar, Pankaj (2009) their papers discussed different issues linked to information communication technology in library with esteem to recent digital age. Library functions are change due to technology and it is necessary adapt it to changes to gather the users need and also satisfy them. Library collection is move from traditional collection towards digital collection as well as all other functions i.e. Design, Planning, Development, Technical support continuing operation management and ICT infrastructure. For digital library project two components are required that and library professional and ICT infrastructure. After data analysis in concluded and recommended that power should give main concern to get better the condition, suitable amount of computer with competence of internet should be provide

to the academic institutions, fund should be increased and regular supply of power should be provided to nullify the disturbance.

Rahman, Abdel, O. Hassan, (2009) entitled their papers "The state of ICT implementation and training at the university of Khartoum library system" focused that continuous developments in information and communication technology (ICT) have had a far reaching impact on librarian information and institution services worldwide. Academic libraries, particularly in the underdeveloped world are lagging behind for a number of reasons; the important are being the lack of necessary skills to deal with ICT by academic library staff. The author investigates the current solution of these developments. He suggested that in order to prepare the staff and equip them with the necessity skills to cope with advances in ICT and suggested number of recommendations and suggestions for remedying the situations and bringing the gaps identified in the ICT solutions is the setting up of an ICT plan and a subsequent ICT training strategy for library staff.

Shah, N. Chand (2009) entitled his paper, "Academic Libraries and Librarian in the electronic teaching-learning era: Is there any more need"? The author pointed out that the role of the librarian in the changing society, services offered by the e-library, elearning and issues faced by the librarian. The role of librarian and library professional just changes their identity e.g. Cybrarian, Information Processor, Information Consultant etc. by providing effective combined (traditional as well as digital library environment) library services to it is student users librarian can be act as an catalyst of achieving high scores in both qualitative and quantitative in nature.

Upadhyay, Navin (2009) his article entitled, "Is Paper on it is Way Out in Academic Library of India"? Explain that time is of essence for libraries to review the pace of change occurring within higher education publishing industry and how information will be provided in academic libraries to their vastly changing student and faculty population and their information seeking behavior. The paper examines the present scenario of the present Indian academic libraries, some of the reason in support of electronic collections and challenges, opportunities and new role of librarian in changing environment of digital librarianship in the 21<sup>st</sup> centuries.

Sayed, M .Abu (2009) the author entitled his article "College Library Information System: Status and Recommendations for Development to Meet Vision 2021 for Digital Bangladesh", pointed out that some recommendations in college libraries. Librarians have to perform almost all supervisory as well as technical works with a limited number of technical and non-technical stuff. He wanted to development of college library services to meet the vision 2021. The libraries said to be the information center, knowledge center. So he requested all future planner, stakeholders, politician, policymakers have studied in college library and recommendation to take care of the colleges.

Kamila, Kanchan (2009) entitled his paper, "Managerial Change for the Survival of Library and information Centers in information and communication technology era" discussed that managerial changes in Libraries and Information Centre (LIC) to survive the LIC's in 21<sup>st</sup> century, it is concluded that change management is the only feasible solution to overcome all the difficulties and problems created in ever changing environment for the overall development and progress of LICs in the ICT era. Due to fast paced technological change and new skill requirements information professional are increasingly required to renew their skills are practice in order to gain and awareness of technological advances.

Kohl, F.David (2009) the author entitled his paper, "Towards a New Understanding of the Library Mission: Vision and Implementation" explained that libraries are witnessing a transformation of the information environment far eclipses earlier changes ,even those brought by the advent of printing press. This presents both their approach and thinking use to learn how to make these ideas visible. He pointed out that the needs to digital revolution as not just a better way of doing our traditional business, but as a fundamentally different way of doing business altogether. His message is that information is no longer, an important sense, physically based. Not only all information increasingly digital, but that digital information is increasingly independent of physical storage devices such as CDs or computer tabs.

Upadhya, N and Chakraborty, H. (2008) in their paper "Online Journals and data bases; a study of use and awareness among academics at main library .I.T, BHU" examined awareness of researchers and use of online journals databases available through UGC-INFONET, INDEST consortia. They also highlight suggestions given by the user for improvement of online resources like some more awareness and training campaign programmed is required with the help of expert from the online publishing agency; time slot for access the e-resources of the library should be increased and some

required e-journals must be subscribed by the library those are much more useful for the user.

Basode, Sadanand Y and Periera, Shamim (2008) author focused computerization in academic colleges of Goa is not different from state libraries. Stake holder like librarian's, college administrations and library staff must initiate to computerization in order to provide successful and competent services to users or students .Librarian must improve the abilities in order to meet the rising hope of users from libraries.

Sinha, Manoj Kumar, Chakraborty, Shankar and Bhattacharya, Jayanta (2007) application of information communication technology (ICT) in college libraries of Barak Valley, in "Library as Global Hub; perspective & challenges, 5th convention PLANNER 2007. The author mentioned that in a digital world of information, library not as a ware house, It is an information Hub, possibly as a service, a guide and facilitator to information.

Sinha, M.K and Sahay (2006) showed the status of information infrastructure and computerized library and information services and university libraries in India for information sharing and global access in Network and digital environment.

Sharma, R.K. (2004) has explained in his book "Management, Information, knowledge and Power in the Cyber age". This book is a valuable collection of articles for scholars, teachers and practitioners in the field of library and information science. It is an outcome of the contributor's view and experience on the rapidly changing and evolving role of information in the society. The author proves that rapid advances in communications and information technology are changing the way packaging, transmission and consumption of information today. The challenge for the international community is to secure free flow and accessibility of current information. Corresponding to these changes the needs, uses and functions of information have also changed the multiplied many fields The need for information is indispensable for the decision making process as essential to human development.

Mishra, Parasnath (2003) his article explain the present picture of computerization particularly in academic libraries in the state of Jarakhand. All the University libraries are having good IT infrastructure and modern facilities. As far as

library computerization is connected with joint responsibilities of state authority.UGC and INFLIBNET to make the library computerized.

Vyas, S.D (2003) conducted the study in 12 state universities as well as deemed university, institutions of Rajesthan to study the status of library automation. It concluded that university libraries are interested in library automation. But INFLIBNET should also provide multilingual script to SOUL software to speed up database preparation. Finally UGC should consider sanctioning a post of Information scientist and a technical assistant. There are a lot of reasons for slow speed of library automation which have stated in the study.

Goswami, Bhupen (2000) explained his book "Collection of Librarianship in Assam in the new millennium" is a valuable book of library and information science. The author, focus some important article of prominent authors of library science. The content of the articles are relating to information technology, E-.mail, Internet, automation, Information sources, Library management, and other valuable research papers.

Khochar, R .S (1999) tried to develop library and information science atmosphere and depict a clear picture of library network, software, hardware, needs of library training, management policy. The author mentioned that the libraries have changed the outmoded concept of preserving a large number of reading materials for the sake of preservation only. He mentioned that to have better result, different aspect of modernization practices must be studied methodically. This book is helpful for professional librarians and administrator of the future in terms of issues that must be faced and decisions that must be made concerning library management today.

Pradeep, C.Ganesh, and Pand Ramareddy, E (1999) discussed the responsibility of the libraries, fund provider bodies, central organization, LIS Professional and a group of users in the relation to quickly shifting to IT. Study says change is expected, but also said about need to acquire the skill to manage the change. Libraries have to create image about the prospect of today for greater tomorrow, since in advances in thetechnology, new age of technical expertise, LIS professionals must rotate themselves to the new technology. Today more technologies are becoming available for opportunities and change and we have to take advantage of it.

Jeevan, V.K J (1999) in his article focused on availability of information technology in Central Library at IIT, Kharagpur which is fully computerized with

electronic resources for accessing electronic databases is also set up to offer information on those sources which are not present in the library. It is also mentioned that electronic databases subscribed and research projects undertaken so far in the library.

Sharma, P.L. (1998) describes that Information technology (IT) involves computers, electronic media and satellite, telecommunication and storage devises. It has made a deep impact on the academic libraries. The emphasis of these libraries is shifting from collection to access. Academic libraries in India still face several challenges due to the emergency of IT. It lists all the challenges and deals in detail about one of the foremost challenges, i.e. manpower development in the context of IT. It discusses the provision of raising the facilities on IT in the library schools, inclusion in in curriculum, short term training facilities by other organizations, refresher courses, participation in workshops, seminars, conference, conventions etc. For their own survival and for survival of the profession, the librarians have to play their role effectively in future; otherwise they will be replaced by a new group of professionals.

Waters, (1998) states that digital libraries are organization that provide the resources including the specialized staff to select, structure, offer intellectual access to the Internet, preserve the integrity of and ensure the persistence over time of collection of digital works so that they are readily and economically available for use by a defined community or set of communities.

Jefferson and Hussain, F (1998) conducted a study on "using the internet as a teaching resource". It discusses how Internet may be used to support learning and teaching, the motivation underpinning the need to use internet and the result show that in general people spend 1 to 5 hrs on the internet during a week.

Rao, Ravichandra (1997) focuses automation activities in academic libraries in India which have slowly picked up. Funding agencies have now started providing hardware facilities. Software facilities are not adequate enough to start automation activities at a reasonable pace. Further CD--ROM based information services and Email services are becoming popular. However, the challenges remain same over the last two three decades on trained manpower requirements, preparation of machine readable catalogues, sufficient and free flow of funds etc. Libraries have to overcome these challenges for a successful implementation of automation. Prasad, H N (1991) focused his book "Information needs and Users of library science in modern times." The author discussed that, information needs which may vary considerably from individual to individual. It is possible however, to define groups of users that share common information needs. Information use studies over the years have attempted to explain information use phenomena to understand information use behavior and improve information use by manipulating essential conditions. He mentioned that use is the key purpose and user is the key and dynamic component of any library and information system. The effectiveness of a library and information system depends on the extent to which system characteristics correspond with the user. System Designer, planners and manager of Library and information systems have to properly consider the role of human factors and their effect on the acceptance and utilization of information. Information as a basic resource and it is used by the users. It is possible, however, to define groups of users that share common information needs. This book is intended for students of Library and Information Science as well as for library professional and researchers.

Nath,Madan Som (1987) his book "Computer and Library Services" addressed to the people interested in computer science, especially for those librarians who wish to serve their readers, those who are crazy for knowledge about computer, the student of computer science, teacher of computer science, library staff, business man etc. The author explained in his book about challenges of computer, computer and library services etc.

Kumar, P.S G (1987) focuses in his book about the impact of ICT on library and information science. The author pointed out some of the major factors that contributed to the introduction of computerization in libraries include- (a) Greater speed (b) Increased inefficiency (c) Economy etc. The author mentioned that history of libraries is closely related with human civilization. Some of the ancient seats of civilization like Egypt, Mesopotamia, Babylonia, Assyria, Greece, Rome, India and China etc., were the centre of learning and libraries. He also mentioned in his book about historical foundation of libraries and materials of writing like wood, linen, cloth, clay tablets, papyrus ,parchment and vellum etc .The author explained his book very clearly about the college libraries ,functions, role and services ,norms of library staff ,staff pattern teaching methods, examination system and adoption of modern management procedures and techniques and success key of computerization of libraries. The author also mentioned that library is a social institution. This relation brings into relation

with, the writer and publisher, librarian and reader the relationship can viewed in terms of producer, intermediary and consumer.

Tagore, Robindra Nath (1925) at Bengal library conference once said "What makes a library Big"? He said that it is not a big building, big collection of books, big finances and big staff that makes a library big but it is the big use of the resources of the library that earns big names to it". The value of Books and library is epitomized in the larger use of its collection.

### 2.2. LIBRARY PROFESSIONAL & TRAINING

Sakarkar, Sachin, D and Kuralkar, Rushi, Kumar R (2013) in their paper explained how training plays a crucial role in creating an ideal atmosphere for ICT orientation of Libraries to evolve their attitudes towards ICT amenities. This would surely reduce the fear of digital divide amongst society and Librarian could become an ideal guide to all eager readers to avail broad spectrum of knowledge available at an affordable time. The ICT implementation is very much safe and progressive to the society under the guidance of a well- trained and positive librarian.

Basavaraja,,K (2013) outlined and discussed the professional skill and technology competencies necessary for library professionals and considers how these are required and developed to service in an ever changing technological environment, to meet the future challenges of the  $21^{st}$  century.

Seyed, talab and Tajafari, Masoumeh (2012) identified and compared the impact of ICT on training of library staff in two university libraries each of India and Iran. Finding of the study shows that both Indian and Iranian library staffs believe that introduction of ICT in libraries has created a need for training. Library staff from Iran has perceived the ICT on their training needs more than their Indian Counterpart. It is concluded that university libraries in both countries have, get their library staff training in ICT.

Karen, Jurasek (2011) says that libraries must uphold professional standards and commitment to serve. He describes that along with its services, resources and technology, the library is both a physical and virtual space for the 21<sup>st</sup> century. The author concluded that the academic library professional must develop a virtual electronic learning system to enhance the user knowledge and to accommodate an increasingly diverse group of users.

Modal, Arup Kumar and Bandyopadhay, Amrit kumar (2010) in their study examine the present situation of IT application and human power problems. There is no proper training for library staff and also authorities were not interested in implementation of IT in the library and a fund was insufficient. IT skill in library staff found below expectation and attitude was not positive.

Singh and Pinki (2009) in their paper, highlight the skills required for LIS personnel in technology driven environment. Academic libraries are facing challenges which are arising due to applications of ICT and digital revolution. In the paper, authors discussed the impact of emerging challenges in the academic libraries. It has been suggested that there is a need to acquire the applications of technology. The authors stated that there is a need to acquire new sets of skills to manage technological issues to survive in this technology based environment.

Sinha (2008) has pointed out the scope of ICT applications and Internet use for providing better library services for the users as well as the library activities in his study. Importance of the ICT is gaining value of the LIS profession due to benefits and there is a need to automate the libraries.

Nath, Amar, Bahl ,Gautam and Kumar, Praveen (2007) their articles is based on the part of a survey that investigated the ICT skills and knowledge of libraries at the Chandigarh City. Study populations of 21 librarians of Chandigarh city were surveyed by a questionnaire to establish in what ways librarians were using ICTs, what were the level of ICT knowledge and skills amongst the libraries, what problems the librarians faced in the use of ICTs and what their ICT training needs were. Interpretation of the results revealed a low level of ICT knowledge and skill amongst librarians and a general lack of formal training for ICTs amongst the academic librarians.

Papu, Ramesh B. Vinayagamoorthy and Gopalakrishnan, S (2007) the study illustrated that the library and information professionals working in engineering colleges in Tamilnadu state acquired considerable basic skill in ICT. But it's necessary to concentrate more on online services and e-library services. It is suggested that library science courses should change their curriculums and add ICT skill topics. Librarians have to improve their skill of ICT to provide expertise services to the users of institution.

Krosky (2007) in his paper pointed out that the use of Internet and Web Technology is more popular and these are very helpful in developing academic libraries. He said that the web has changed the face of libraries and event an ordinary user can use it for the global conservation and exchange of views instantly. The Inter net is used for browsing information. With the help of Web tools user are exchanging knowledge and also able to create, collaborate, socialize, and share data with any one at less cost. He is of the opinion that there is need to develop academic libraries using modern tools and technology.

Kaliammal and Sarasvady (2007) mentioned that several recent initiatives and development programs offer due importance and focus on providing information and communication technology (ICT) system as an enabler and access to information. From information management view point, one can emphasize that providing information and enabling ICT systems, is a major effort in bridging the gap between knowledge have and knowledge have not. This is because the ability to use information resides in capacity and capability to create knowledge from such information.

Venkata, Ramana P. (2006) discussed role of librarian on new information communication technology based on rapid revolutionary changes. Library service profession is one of the most challenging professions in the knowledge society. Library professionals need to develop professional competencies to adopt continuously changing technology. They must struggle, improved new skills and knowledge about new technologies to survive and provide advance services to users. They have to keep themselves update with changing new technological environment.

Devi, Rama T. (2005) in her article focused need of training for library staff & user in proper make use of information resources. Digital or electronic information resources are highly technical. So librarian and library staff and user should have knowledge of latest technologies to use these resources, trained librarian is an intermediate between resources and users. It is very important that training of library staff must be provided using latest technology and in the similar lines the user also get training properly. Training should be once or twice for the staff and users

Sinha (2004) also studied the status of ICT infrastructure in the 15 University libraries of North East India, mostly central universities except few State University. He has discussed the problems faced by the LIS professionals of North East India for the implementation of the automation project despite full support from the UGC /INFLIBNET which has been regularly imparting training for LIS professionals of North East India, organizing PLANNER (The convention for Planning of library automation and Networking for North Eastern Region) on regular basis.

Nyamboga, Constantine M. and Kemparaju, T, D (2003) in their paper entitled "Development of libraries and Information centre in electronic age; developing country perspective" discussed that the challenged posed by the accelerating pace of change. In the world of information especially in the developing countries and stresses the importance of managing the change by focusing on collection development, training & development skills of the information professionals and also library users. It also examined and provided general views on how libraries and information centres should approach the situation in order to accomplish and acquire at least simple electronic resources while taking into consideration the libraries and information context and development skills of the information professionals.

UNESCO (2000; 12) defines ICT as the "Scientific, Technological and Engineering Disciplines and Management Techniques used in Information handling and processing". The use of ICT s provides quality services to users ICT have revolutionized activities in all sphere of life especially, library and information service.

McManus (1998) stated that if Librarians and Libraries don't become pedagogical players in the information and education enterprise, then turning to the internet as the first source for information will make no sense to more and more students and college administrators. The educational roles of academic librarians are expanding especially in teaching library-information skills, Collaborative teaching learning processes and curriculum development with faculty and librarian. The literature review showed that information literacy is more important in the escalating complicated complex on-line environment. Information literacy skill is survival, a desirable outcome of higher education; key competency being the foundation of literate society. In the Distance education system, educational roles of college library and librarian have long been talked about as a key factor for the success of the distance learning programme.

Websites of various organizations have helped in finding out different required information. In Assam there are literature as regard to investigate and study, investigate the role of college libraries and application of ICT in college libraries /Academic libraries.

In this field of study different literature i.e. books, periodicals articles, reports, thesis etc. covering various aspects relating to the subject matter has been studied. Selected sites on Internet are also searched for collecting necessary information and data in order to have proper knowledge on the subject matter of the study. Some important findings related to the study are stated in the last chapter.

A number of journals are also taken into the consideration for the study. The "UNIVERSITY NEWS" is also one of the important journals. This journal is most important for researcher and student of higher educational institution.

A large number of literatures in different forms are now being published on different aspect of college libraries. Online search are also considered for basic tool of literature review.

### 2.3. CONCLUSION:-

It can be concluded that all these literature review indicates importance of positive attitude of library professionals towards information technology and use of information technology in different area of library activities to enhance the service quality. All the components of ICT in academic library covered and highlighted in literature review with finding of studies, suggestions and conclusions of different researcher which strongly emphasize the need to implement ICT in college libraries with full vigor to achieve the goal. User's satisfaction, daily uses of the library, problems of modernization of libraries etc., would helpful in designing the questionnaire and hypothesis for comprehensive survey of higher learning in these educational institutions.

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