ABSTRACT:
This research work examines the prospects and challenges of LIS education worldwide and introduces the doctoral fellowship program, Cultural Heritage Informatics Leadership (CHIL), launched by the School of Library and Information Science (SLIS) of University of South Carolina. It describes the major features and outcomes of CHIL. The Fall 2011 CHIL fellows are interviewed in this regard; later on a structured interview is also conducted with CHIL fellows. Initial findings of the interview indicate that the learning objectives and professional backgrounds of the selected fellows harmonize with the outcomes and targets of the CHIL program. The paper also specifies that CHIL is a great tool to disseminate information literacy globally and diffuse LIS education, particularly in developing nations, more consistently.

OUTLINE:
This study aims to introduce CHIL as an ideal model to provide a richer purpose and a richer population for LIS doctoral education. In this regard, the work reported here is a preliminary study and it focuses on the development stage of the CHIL program. It delves into the discourses related with LIS education prospects, challenges of the subject faced worldwide, CHIL program background, and how the Fall 2011 CHIL fellows fit into the program.

In this context, the paper, first, depicts the prospects of LIS education, second, determines the challenges of LIS education worldwide, third, presents the CHIL describing its major features, target audiences, and outputs which all together emphasis to reduce the existed problems within the subject. Later, the interview results are also reported to ascertain the integration of the CHIL targets and outcomes.

PROSPECTS OF LIS EDUCATION:
Society at large, and each individual it seems, has come to recognize the importance of information as a basis for informed decision-making and knowledge production. This is equally true in the public and private sectors.

The power of cultural institutions, such as libraries, and museums, to promote literacy and shared civic engagement has been obvious for decades (Rose, 1917; Anastasiades, S., 1999). Professional librarians work in fields as diverse as opening doors to learning for preschoolers to offering value-added information services for leaders in major corporations. The librarians are responsible to integrate their collections, form partnerships, and capitalize upon new discoveries and technologies. Through this cycle they are contributing to academic achievement in
schools, colleges and universities and developing independent entrepreneurial companies to manage print and electronic resources for small firms. Professional archivists likewise move beyond traditional roles and responsibilities. Some maintain municipal archives for legal or cultural purposes while others organize virtual archives of images on the web. “Museums and libraries have a unique role as the primary stewards of culture and heritage and, with this, a profound responsibility for ensuring that future generations have access to original materials. How best to preserve and provide access to these materials in a way that serves future generations should be a central question for museums and libraries in the 21st century.” (IMLS, 2009)

An issue of Library Trends (Lynch, 1984b) discusses “research in librarianship” and offers 12 essays which identify the major contribution of research in librarianship. This issue serves as a reminder that LIS has a body of basic and applied research, useful in advancing LIS as both a profession and a discipline (McClure et.al., 1991).

CHALLENGES OF LIS EDUCATION:
However, the practice of Library and Information Science (LIS) education all over the world does not hold the identical harmonious trends.

Golde and Dore point to high levels of dissatisfaction among doctoral students accompanied by an interest in taking more courses outside of their discipline (Golde, C.M. & Dore, T.M., 2001). Speaking more recently and scathingly of the traditional doctoral programs and the members involved into those programs, Harvard University’s Louis Menand asserts that, “it is self-governing and largely closed community of practitioners who have an almost absolute power to determine the standards for entry, promotion, and dismissal in their fields. The discipline relies on the principle of disinterestedness, according to which the production of new knowledge is regulated by measuring it against existing scholarship through a process of peer review, rather than by the extent to which it meets the needs of interests external to the field.” (Menand, 2009)

Even more than four decades ago, (Wasserman, 1968) described two major challenges faced by the then doctoral programs: first, developing a vital educational philosophy and second, attracting talented and experienced faculty.

LIS education in the low-income, lower-middle-income, and in many upper-middle-income countries, relative to many high-income countries, is a newer scholarly field. Studies (Malekabadizadeh, et.al, 2009) generally point out that in the least developed countries LIS faculty have many different kinds of training and skills, but their training may not be appropriate for the current needs of society. Many librarians who have completed an LIS program do not consider this discipline an advanced and crucial field, but regard librarianship as a simple duty. Instructors who lack expertise and the lack of interaction between the computer colleges and communicative sciences (Ghardirian and Asili, 2005), has also delayed the reformation of LIS programs (Fattahi, 2006). Accepting students to LIS programs without an interview or other rigorous screening is another challenging issue. LIS programs have not responded to the expectations of the profession or of the university community. It is necessary reform the organization, curriculum, training material and equipment, and instructor preparation. (Malekabadizadeh et al, 2009)

Maintaining quality in LIS education, even in the developed countries, is always a critical challenge. Researches discover (Ghardirian and Asili, 2005, Fattahi, 2006) highlights that four factors are affecting the quality of LIS education: first, the content of the curriculum, and, second, course recognition by the professional associations. The third and the fourth important components are faculty and students.

Therefore, in order to maintain quality, promote more diversity in LIS education, and focus on ways that connects educational outcomes to resources, SLIS pioneers CHIL program. Through wide range of facilities of CHIL, including scholarships, SLIS aims to make substantial change in the landscape of LIS doctoral education for the better over the past years.

CULTURAL HERITAGE INFORMATICS LEADERSHIP (CHIL) PROGRAM:
The School of Library and Information Science (SLIS) at the University of South Carolina was recently awarded an Institute of Museum and Library Services (IMLS) Laura Bush 21st Century Librarian Program grant to enhance library and information science education and to help develop library leaders. The program focuses on the intersection of cultural organizations including libraries, museums, and archives. The program calls for more dynamic and sustained interaction with faculty mentors and employers from a wide variety of sectors, including business, government, non-profit and educational organizations. The SLIS grant program, Cultural Heritage Informatics Leadership (CHIL), addresses the need for new doctoral professionals who
understand the unique problems that these cultural institutions face. The majority of the grant funds are being used for student support, course development and delivery. A little over $600,000 of the fund is dedicated for the student support which includes 7 stipends of $15,000 a year for three years, full tuition reimbursement for three years, and the opportunity to attend professional conferences related to their interests during this period.

THE MAJOR FEATURES OF THE PROGRAM:

- An interdisciplinary focus with courses and learning experiences that include Library and Information Science, Museum Studies, Archival Studies, Public History, Journalism and Mass Communications, Public Administration, and Business Administration. Students in the program will explore problems and perspectives that transcend traditional disciplinary boundaries. During first two years, the students of this program will pursue 15 hours of LIS doctoral foundations courses with 12 hours of College of Mass Communications and Information Studies electives and 12 hours cognate courses selected from outside departments of USC, including Museum Studies, Business School, Public Administration, and the Public History.

- A focus on the practical problems facing cultural heritage institutions with required part-time and full-time internships in these institutions during the student’s program of study. During the first semester of the third year, the students will complete at least one semester full time field work experience. During the semester, the students will develop and lead a project that addresses a problem that they identified during their first semester field placement. This activity will provide the student proactive leadership experience in an environment of interest. This can also direct them towards dissertations which address real-world needs of a practitioner community.

- Extensive opportunities for gaining teaching experience, development of workshops, seminars, presentation of research papers, and attendance at national professional conferences. The fellowship students may gain experience as SLIS Teaching Assistant or chose to return to a practice environment while complete their dissertations. SLIS designates particular funds for its students to attend professional conferences, for instance, ASIS&T 2011 annual conference at New Orleans, USA.

- The size of the program is designed so that students will have sustained interaction with faculty from a variety of fields of study and work experience. The students will be able to practice more dynamic and sustained interaction with faculty mentors and employers from wide variety of sectors.

- The informatics perspective of the program encourages the student to explore the connections between technology, information, and cultural institutions.

- The creation of new partnerships, with faculty, with fellow students, and with the managers and leaders of museums, archives, and libraries. Great emphasis will be placed on creating and fostering a life-long learning environment. The program invites leaders and innovators of all areas ranging from academia, cultural heritage institutions, and technologists to help the students develop a wider perspective.

- Graduates of the program will be prepared to assume a variety of positions in cultural institutions as well as teaching and research positions in universities. The program concerns to arrange field placements that will allow the students to develop tools and projects that bring value to many types of communities worldwide, many of whom have traditionally received less attention.

TARGET GROUP OF STUDENTS AND FACILITIES:
SLIS expects the program to be special interest to museum and LIS practitioners, academicians in these and other fields, individuals who would like to pursue multidisciplinary doctoral studies specifically equipped to explore problems faced in these practice areas. The design of the program allows the students to maintain hybrid careers which allow them to move between service, practice, and academic settings. The curriculum is particularly intended to accommodate the learning needs of atypical doctoral candidates whose interests focus on cultural institutions and whose career objectives are both scholarly and entrepreneurial.

OUTCOMES OF CHIL:
CHIL is introduced by SLIS at USC to create ample amount of opportunities for its graduate students in respect of career prospect and progression. During a private communication with Dr. Jennifer Arns, current Chair of the doctoral program of SLIS, USC and one of the masterminds of CHIL, she points out
that the program focuses on making the studentsfitting candidates to avail wide range of facultyopportunities in the library schools globally. SLISHas a manifesto for preservation and promotion ofcultural artifacts and organizations because thesearetremendously important to maintain, prosper andcreate knowledgeable society. The departmentemphasis these ideas in MLIS classes and is pleasedto apply similar in the doctoral level. She alsohighlights that the program is innovative, experimental and develops through testing. It isdesigned to yield unique outcomes, especially interms of writing dissertation with realistic andconstructive solutions to the real world problems.

In Fall 2011, overall fifty students applied into theCHIL program. In addition to the basic admissionrequirements, only seven students were selected onthe basis of some unique features, such as, evidenceof scholarly potentials, work experiences in culturalinstitutions, background in the arts, and zeal of usingtechnology. Selected students come from diversebackground with multifaceted aim to disseminatecultural literacies with the help of cultural institutionsand arts. Interests in the worldwide impact of LISeducation also played a significant role in the studentselection procedures of the CHIL program. Inclusionof the international students fosters the diversity ofthe program greatly. This intellectual diversity istargeted to ensure that, going beyond borders, sociedades in large, including developing nations, areprovided with highly capable scholars and that eachperson pursuing doctoral studies has the opportunitiesto flourish and successfully complete their doctoralstudies. With the benefit of the CHIL, the doctoral students are able to becomedoctoral-trained teacher-scholars for library andinformation science programs worldwide, and canpromote the research-based foundation for theseareas within the profession.

This research-intensive program is preparing thegraduate students for faculty and administrativecareers in universities, research centers, and thepublic sector. It is awarded to students who demonstrate excellence in the advancement anddissemination of new knowledge related to thecreation and use of information by individuals,organizations, educational institutions, andcommunities. Within this framework, the doctoralstudents are focused to pursue the followingprogrammatic goals:

- Nurture critical and reflective thinking on thefundamental issues and elements of problems related to the utilization ofinformation.
- Foster an environment of substantive andproductive mentoring and apprenticeship.
- Prepare to become passionate about the roleof information in human affairs.
- Foster cross-disciplinary thinking and research and academic expectations.
- Master the literature and practice of thebroad interdisciplinary field of InformationScience.
- Develop in-depth knowledge of areas ofconcentration.
- Develop profound skills of synthesis andanalysis and research design.
- Develop appropriate expository skills.

Engagement of the doctoral students into the CHILprogram is also revealing new experiences anddimensions which will eventually inform the future direction of curriculum development. Due to the goalof the program the students are encouraged to getreal-world internship and it will help them to identifythe existing and new trends of the employmentoutcomes so that they can develop courses that will
more effectively meet the demands and needs of the industry they support.

**METHODOLOGY:**
SLIS has started testing CHIL from Fall 2011 and it is now going through the preliminary stages. To examine the coordination between its features and execution, the author has conducted an interview of the CHIL fellows. By using a structured interview of the fellows, the paper also investigates how they plan to apply the outcomes into the practice. Five questions were asked to all of the six fellows out of the seven, with fifteen minutes time limit. The seventh fellow is excluded, since this fellow will start the program from Spring 2012. All of the respondents replied within the time limit and forwarded their answers through emails. Of the six fellows, three are internationals and three are American citizens while two are females and four are males. In terms of age group, they all fall into 28-40.

To identify and examine the missions and targets of CHIL, the author, with semi-structured questions, interviewed Dr. Jennifer Arns, the SLIS doctoral committee chairman and one of the CHIL masterminds.

**INTERVIEW RESULTS:**
CHIL is planned to attract and find potential talent going beyond borders and not limiting into particular geographic locations. The purpose of the interview was to identify how the selection of the seven doctoral students matches the goals, objectives and outcomes of the program. To complete the interview, the students were enquired individually, with 5 questions, within fifteen minutes timeframe. First, How do you define cultural heritage institutions? Second, what is your research interest and what is your goal, career-wise, after the successful PhD? Third, what responsibilities you had in your job in the past, specifically in the cultural institutions? Fourth, why did you join/choose the CHIL program and what do you like best in the CHIL facilities? Fifth, what is your vision about LIS education both nationally and globally and how it can influence change in developing nations?

The responses, in this regard, were tremendous and varied due to the nature of diversified backgrounds of the fellows. The Russian fellow of the program defines the cultural institutions as the social establishments that collect, manage, preserve cultural legacy, and pass it from generation through the continuum of space and time. With specific interest in information needs assessment and exploration of the uses of technologies into digital and virtual libraries, he welcomes every opportunity of becoming an academician or a practitioner utilizing his previous librarianship experiences both in USA and Russia. Freedom to make essential decisions on the basis of available varied courses of the program was his topmost criterion to apply into CHIL while foreseeing LIS as a crucial component to the illiteracy reduction worldwide, particularly in developing nations.

With strong expertise in government information librarianship and extensive teaching background, the Chinese fellow of the program targets to fulfill her aspiration for teaching and apply research in scholarly environments. She describes cultural heritage as the collection of the profound records of human knowledge. The multidisciplinary aspect and internship opportunities were the salient features which grew her attention for CHIL.

Another enrollee of the CHIL program describes cultural heritage institutions as those which catalog, collect and display the whole breadth of human knowledge and possessions for education, entertainment, and the sake of human desire for play and knowledge. This former archivist, also a former curator, envisages to direct and/or curate a major museum and design ways for users to gain the most impact from their experience. She even prioritizes CHIL due to its course offerings, specifically in museum studies. She envisions that LIS education has the capability to help people think and frame questions in innovative ways in order to maximize knowledge acquisition.

SLIS has also recruited a fellow who is by profession is a former newsprint journalist plus a librarian and has a strong interest to deal with the hate practices found in cultural heritage institutions. This visionary researcher aims to device various plans to promote public good nurturing diverse areas of cultural heritage institutions. He thinks LIS education needs some revamping and also aspires to contribute in LIS education course development and identifies the necessity of introducing more practical oriented tools to advance the profession.

CHIL welcomes multidisciplinary aspect for the doctoral curriculum by enlisting another business graduate into the program. He defines cultural institutions as those cultural elements within a particular culture/sub-cultural that are not only valued but provide opportunity for leaning and knowledge development. This former academician, with his creative background and research interest in open access, cloud computing and its effective use in
instructional technology, intends to deploy his scholarly knowledge into government agency and library school.

SLIS, for the CHIL program, has enrolled another international practitioner, however, due to unavoidable situation; this fellow is expected to join the program in Spring 2012. Owing to her absence at the school presently, this investigation is made limited to the available students only.

CHIL program further makes its significance through the inclusion of an international potential practitioner from a developing nation. It has identified the first ever student from Bangladesh to accomplish the doctoral degree in LIS education in USA. The author of this paper holds that revolutionary position to become the intermediary between Bangladesh and USA to promote LIS education efficaciously and create more scholars in this field as well as write erudite papers, particularly in the context of developing nations, to provoke intellectual skills.

The interview attempts to identify and coordinate the goals, objectives of the CHIL program. All of the interviewed fellows are interested to prepare themselves for appointments either in academic departments that wish to develop museum informatics programs or cultural institutions committed to the development of collaborative interactive learning environments. Their preparations and professional backgrounds are strongly related to the integration of cultural institutions. The course offerings also match flawlessly with their research interests. Intellectual papers and doctoral dissertations also can signify the impact of LIS education comprehensively, exceptionally in developing countries. Besides, the selected students have already engaged themselves into the professional organizations such as ASIS&T, ALISE, and ALA. All of these attributes collectively ensures the purposes of the CHIL program.

CONCLUSION:
Since the late 19th century, there has been a good number of discussion and deliberation concerning effective models of doctoral programs. As a result, well known and substantial programs have been devised, however, in future, to contribute to the needs of academia and society at large development and testing new frameworks are prerequisite. In this concern, CHIL program focuses on a course which will require interdisciplinary coursework and full-time field placements specifically designed to explore the common threads that unite museums, libraries and other cultural institutions and the technologies and social systems that support the development of creative and other cultural institutions and the technologies and social systems that support the development of creative and collaborative learning environments. Upon graduation, the fellowship recipients who follow traditional academic paths will be equipped to develop courses and curricula that add a new dimension to MLIS and museum training programs. Those who chose to pursue a wider set of career objectives will be positioned to lead innovative projects related to new technologies and the development of interactive learning environments in a wide variety of cultural institutions.

REFERENCES:


