

iSchools Building on the Strengths Found in the Convergence of Librarianship, Archival, and Museum Studies to Improve the Education of Managing Digital Collections

A summary of a workshop held in connection with the iSchools Conference
February 12th, 2013, Fort Worth, USA

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Abstract

In many iSchools, the convergence of professional education for Librarianship, Archival, and Museum (LAM) Studies is becoming relevant to the discussion of improving and expanding the iSchool curricula related to the management of digital collections in these cultural institutions. This paper is a summary of the highlights of the emerging issues identified from the discussion in the February, 2013 workshop on how iSchools participate in research and education relevant to the skills needed of information professionals in libraries, archives, and museums relevant to the application and access to the digital collections held by these institutions. The six workshop presentations and resulting discussions indicated a disparity in the curricula not only among institutions in a given country or region, but as well around the globe. During the discussion there was a general agreement about the inclusion in the core curriculum of general introductory or intermediate level information technology courses, but there was disagreement about the specifics and the level of details to be desired.

Keywords: Digital collections, iSchools education, Libraries, Archives, Museums, convergence

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Introduction

The topic of the Workshop at the February, 2013 iConference was the identification of factors that contribute to the convergence of Librarianship, Archival, and Museum (LAM) studies. Foremost among these factors is the shared interest in managing digital collections' in different, but similar contexts found in these three cultural heritage institutions. The topic has attracted wide discussions at professional conferences and at Schools of Library and Information Science. The underlying push towards the convergence of education for these distinct, but related professions, can be found in recent Library and Information Science (LIS) literature, specifically in works by Partridge & Yates 2012; Trant 2009; Cox & Larsen, 2008; Markey, 2004, & 2007; Choi and Rasmussen, 2006; and Ribeiro, 2007. These authors have urged that whatever their subject matter, professionals in libraries, archives, and museums will increasingly

benefit from working together to meet the challenges of digital collections creation, management, use and preservation because they share an interest in a common set of problems and challenges related to the management of digital collections management.

Accordingly, the commonalities of libraries, archives, and museums have served as the theme for several conference presentations (Marty, 2009) across the globe. The idea for this workshop "*iSchools Building on the Strengths Found in the Convergence of Librarianship, Archival, and Museum Studies to Improve the Education of Managing Digital Collections*" held in connection with the iSchool Conference February 12th, 2013, Fort Worth, USA arose from the decision taken in 2012 by the Governing Board of the International Federation of Library Associations and Institutions (IFLA) to established a working group to explore the convergence of education of information professionals in archives, museums, and libraries. To some extent, the half-day workshop grew out of the IFLA working group presentation in Helsinki, Finland in 2012, where two of the developers of this workshop made presentations.

The main goal of the workshop at the 2013 iConference was to expand the understanding of the main trends in the interdisciplinary and international research in managing digital collections and related areas within iSchools and how iSchools may design and define more effective curricula for education specifically in the fields of Archive, Museum, and Library and Information Studies.

In the past several decades LAM educators and practitioners have worked towards differentiating themselves and building educational offerings that offer distinctive theoretical and skill based content driven by structural and economic factors (Wilson, 2002: 298). In many iSchools convergence is becoming a relevant issue in the definition of education curricula related to the "management of digital collections" (Marty, 2009; Wilson, 2002). There is often collaboration between iSchools and other departments like Communication, Management and/ or Computer Science which is a further incentive to explore and support some degree of education convergence, given that such specializations are usually considered as the common denominator across professions (Wilson, 2002: 297). The advent of digital technologies and representing collections digitally illustrates how the walls between brick and mortar institutions such as libraries, museums, and archives, are disintegrating in the virtual environment (Trant, 2009; Yakel, 2004; Wilson, 2002). Patrons are increasingly unaware of the distinctions between these types of institutions in cyberspace where searches bring up relevant (or not) information regardless of the source of the digital object. This has led to increased need for interoperability and interrelationships between dispersed information sources. As a consequence, educational programs are feeling more pressure to teach skills that foster this type of information integration and convergence (Yakel, 2004) resulting into the merger of different departments of communication, information science, librarianship, history of the book, archives and Computer Science (Wilson, 2002: 301). As predicted by earlier authors convergence of this kind has continued, and schools and departments have either to develop converged courses independently or sought strategic alliances with other fields to deliver such courses.

Archival education has traditionally been based on degrees in history, but as the archival collections have increased their digital content (either by digitizing existing material, or by accepting “born digital” material), the need for staff more knowledgeable about providing access to and preserving digital collections has been recognized in libraries and archives. Similar recognition of the importance of information technology skills is being recognized in museum studies, an area that in the past has depended on specialized subject discipline education coupled with an internship/apprenticeship-based training. Yakel, (2004) argues that “convergence is a two-way street” which requires a more integrated educational environment where students can benefit from each of the information discipline, perspectives, and approaches to managing information and skills. As students are prepared for careers integrating diverse digital information resources worldwide, they need to have the ability to overcome the distinctions that traditionally have divided and differentiated information organizations (Trant, 2009). This shows that in order to continue with the convergence process, students will have to learn a broader range of technological skills, knowledge management skills, patron interaction methods, as well as collection development techniques that extend across genres, institutions, and formats (Partridge, et al., 2011; Marty, & Twidale, 2011; Tibbo & Lee, 2010; Ray, 2009).

The very idea of convergence arises from the fact that libraries, archives, and museums operate within common social, organizational, political, economic, and legal contexts. Trant (2009) reminds us that convergence brings about collaborations across disciplines that become a natural way of doing business because your education exposes you to diverse backgrounds and viewpoints. More so, cooperation across institution-types will become easier when program alumnae can be found in all types of cultural heritage institutions. Further more creative thinking, problem-solving, teamwork, and continuing education will be emphasized in all aspects of curriculum, and drawn out, consciously, in less-formal parts of the curriculum such as a practicum or internship. Professional development programs that explore common issues across the sector would help librarians, archivists, and museum professionals locally, regionally, and nationally, develop the skills and predilection to work together.

At the same time however, archives and museums do not share the library mission of free and open access to a broad spectrum of information. Identification of an object versus interpretation of an object is a common source of disagreement between libraries and museums in collaborative projects. Another area of dissimilarity between libraries and museums is metadata, since libraries and museums do not share the same metadata standards.

It is clear that the discussion of the convergence of education of the information professionals found in archives, museums, and libraries is beginning. This past year the Governing Board of the International Federation of Library Associations and Institutions (IFLA) established a working group to explore the convergence of education of information professionals for positions in archives, museums, and libraries. While evidence of such convergence was found in North America and in some other places

internationally, clearly there is considerable additional research and discussion that is needed to determine the most effective way to proceed to with further convergence in what is now a very divergent area of identifying educational goals and competencies needed by professional employees in these three cultural heritage institutions.

The iSchool workshop sought six presenters who gave the current status of convergence of LAM education from three different continents of Africa, Europe and North America. In the first part of the workshop six invited speakers presented their ideas about the present status of education in the three disciplines (trying to provide a worldwide view), and their experience in teaching some courses in curricula related to those disciplines. In the second part of the workshop the participants were divided in small discussion groups, with the objective of exploring answers to the many relevant (open) questions. What follows is a brief summary of the presentations and the outcome of the discussions.

Terry Weech, University of Illinois, in introducing the Workshop, stated that presently, the education of information professionals for each of these institutions had primarily separate and diverse tracks and traditions but convergence stimulates the desired result of providing professional education for information professionals, intending to work in different contexts. Of the 58 American Library Association (ALA) accredited LIS Master degree programs in U.S. and Canada, all but 4 offer at least one course on either Archival and Museum studies. Four ALA accredited program also offer degree programs in Archives and Museum studies (sources: ALA and the International Council on Archives - ICA). While some schools educating librarians do offer courses that include discussion of the application of library and information science skills to archival and museum collections, few offer full specializations in Museum studies. This information suggests that there are many more ties and potential for convergence between Library and Archival studies than between Museum studies and either Archival or Library education programs. In the U.S., the Institute of Museums and Library Services (IMLS), formed in 1998 from the merger of the Office of Library Services and the Institute of Museum Services, has played a role in the convergence of missions of Libraries, Archives and Museums (LAM) and many grants were given to joint projects to work on solutions to shared problems, such as outcomes based evaluation, user needs, technology and digitization. A great deal of funding has been provided in the U.S. for specialization in LIS (such as Digital curation) to train professionals in areas that might be applied to all three professions. During the ALA Conference in Seattle in January, 2013, there was considerable discussion of the IMLS funded program to develop PhD programs that train future faculty to teach Archival studies. The Archival Education and Research Initiative (<http://aeri.gseis.ucla.edu>) represents a collaborative effort among eight U.S. academic institutions to stimulate the growth of a new generation of academics in archival education who are versed in contemporary issues and knowledgeable of the work being conducted by colleagues. The initiative seeks to nurture and promote the state-of-the-art in scholarship in Archival Studies, broadly conceived, as well as to encourage curricular and pedagogical innovation in archival education across the United States and

worldwide.

Anna Maria Tammaro, University of Parma, focused on education for Memory institutions (Libraries, Archives and Museums) with special attention to Cultural Heritage in Europe. The factors target for analysis reference the way memory is shared between human beings in time and space, by employing codes to express it (e.g. Language), media to transfer meaning (e.g. Books) and channels which are used to spread messages (e.g. Computer networks). There are about 200 schools training information professionals in Europe, of which 17 provide some specialized education in Archival studies, and about 15 provide specialized Museum studies (Kajberg and Lørring, 2005; ICA, 2004; and Smithsonian Registry, n.d.). The European Commission has been stimulating the convergence of LAM starting from the Digital Libraries Initiative in 2005, financing a number of projects concentrating on common services such as Access and Digital Preservation. The European Commission in 2011 financed, among others, the DigCurV project for developing a program for training digital curators, and a survey has been done about the subjects taught in existing curricula. The findings have indicated that most of the courses are general and convergent, such as Strategic planning, Standards, Technical issues, Legal aspects, together with other more specialized subjects like Certification and Audit or Trusted repository. These findings confirm the results of the IFLA Conference Education for digital curation in 2011. It concluded affirming that the central task for convergence in digital curation should be based on Information Technology, combining the knowledge of traditional information professionals with digital preservation skills.

Frederick Kiwuwa Lugya, University of Illinois at Urbana-Champaign, illustrated the historical perspective and the models of LIS and Archival education in Africa, limited to English speaking countries. A big disparity was found around the continent. Courses related to archives and records management can be found in curricula in LIS programs, and in some cases within the curricula specifically designed for archival specialization, such as Information and Documentation Services, Record Management, Archive Administration, but without Museum studies. Other curricula, included in the archival specialization may include Preservation and Conservation, and Analysis of Record Management Systems. There is no evidence of Museum studies as a core specialization in LIS curricula in the African education programs examined. Based on this review, he concluded that in Africa there is a growing tendency towards divergence from convergence in education for Libraries, Archives and Museum studies.

Vittore Casarosa, ISTI-CNR (Institute for Science and Technology of Information of the Italian National Research Council), Pisa, Italy, described his experience in trying to achieve “convergence” by tailoring and fine tuning a basic course on Digital Libraries for three different audiences. The course consists of six modules (namely, A conceptual model for Digital Libraries, Bibliographic records and metadata, Representation of knowledge, Interoperability and exchange of information, Information retrieval and Web search engines, Preservation of digital content) plus an hands-on laboratory to develop a digital library using the Greenstone system. The course is being taught at the University of Bolzano, where it is an elective for

both a Bachelor and a Master in Computer Science, and also for an International Master in Computational Linguistic; it is being taught also at the University of Parma, where it is a compulsory course for an International Master in Digital Libraries Learning (DILL); finally it is being taught at the University of Pisa, where is an elective for both a Bachelor and a Master in Digital Humanities.

In general, in Italian universities, it is difficult to identify the equivalent of LIS Schools, or Archival studies, or Museum studies. Except for a few universities, where there are curricula specifically intended for future librarians (Biblioteconomia), most of the universities offer a few courses for the future “information professionals” within more general curricula in the field of the Humanities. As a result, most of the professionals working in libraries, archives or museums have a degree in humanistic disciplines (e.g. Literature, Philosophy, History, Social Sciences) or, in more recent times (and in very few cases) a degree in disciplines related to Computer Science.

In this context, “convergence” is really based on the assumption that some of the students of those three courses might end up working in a memory institution, and therefore the actual content of each course should be “customized” by taking into account the background of the students. In Bolzano, where the audience is assumed to have a background in Computer Science, the course has more emphasis on library concepts, like classification and cataloguing, MARC, FRBR, etc. In Parma, where the audience is assumed to have (mostly) a background in Librarianship, the emphasis is more on computer science concepts, like representation of the information, metadata, Dublin core, OAI-PMH etc. In Pisa, where the audience is assumed to have a mixed background (some of the courses already taken are in the field of Computer Science, some others are in the field of the Humanities) there is a “balanced blend” providing the basic notions of librarianship and putting the computer science concepts into the perspective of a memory institution. Preservation is presented in the same way in all three courses, since preservation is certainly one of the main factors in the convergence of the memory institutions.

It is difficult to measure the effectiveness of those courses, as there are very few data. Over the last five years, the average number of students in the course has been 19 in Bolzano, 20 in Parma and 30 in Pisa. For an elective course those are very good numbers, denoting an interest in the subject of Digital Libraries. The University of Pisa has gathered some data over the last five years about the placement of the student after graduation. It appears that about 55% have a job related (to some extent) to their university studies. In this group, about 80% of them found a job within 6 months from graduation, which is considered a very good result, given the difficult economic situation in Italy.

Ron Larsen, University of Pittsburgh, introduced the notion that in order to appropriately consider convergence of these three disciplines, one should consider the missions, motives, and roles of each, for each has its own historical context with origins in an analog world that affect their view of the emerging digital world. Archives, for example, deal with identification and appraisal of records, facilitation of access to those records, and the use, exhibition and publication of materials to benefit scholarship and public

interest. A key driver for the archives profession is the notion of access. Libraries would seem to have a similar role in providing access to information resources, but their mission extends to item-level access (of formally published materials), where archives operate at a grosser level of aggregation, typically offering only collection-level access (to individuals' and organizations' records). Curators (e.g., museum), however, fulfill a different mandate for interpretation of materials. They are typically subject specialists who organize exhibitions and construct displays for museums and galleries.

The three disciplines share some similarities in function, particularly in acquisition, preservation, description, categorization, cataloging, and encouraging research related to their respective collections. But they also exhibit differences, particularly in their attitudes toward access. Librarians and archivists tend to be proponents of and advocates for open access to their breadth of resources, where curators focus on contextual or interpretive access. But even among librarians and archivists there are differences. Archivists seek to serve future generations of researchers... one could think of this as temporal access, where librarians focus on providing broad access to the current generation of readers, scholars, and researchers. One might characterize this as spatial access.

The increasing availability of digital materials in all three areas has encouraged some to wonder about the relation of these three disciplines in a digital world, and it does seem that at some level of abstraction, there may be "convergence." But in the opinion of the speaker it seems that such convergence may be more apparent at foundational levels of these disciplines than at the levels of service that characterize their historic missions. A model may help to clarify this. The Open Systems Interconnection (OSI) model of the International Standards Organization (ISO) provides one potentially interesting approach.

The notion of a layering of increasingly abstract functionality is the basic idea, with the question being whether some of the lower levels in such a model may offer a common foundation of utility to librarians, archivists, and curators of digital materials. The specific layers of the ISO OSI model are of less interest than the notion of increasing levels of abstraction that it employs. So to take this idea one step further, while preserving the basic idea of seven levels (which is not necessary, but convenient for the moment), one might consider a seven layer "convergence model" for librarians, archivists, and curators along the following lines.

7. Application (performing functions associated with the missions of each discipline)
6. Presentation (organizing and displaying information resources consistent with mission)
5. Session (managing the human interaction with information resources over time)
4. Visualization (enabling human perception of digital media in varying forms)
3. Organization (providing data structures and metadata to support access and use)
2. Representation (structuring data into semantically meaningful units)
1. Digitization (capture and storage of the digital artifact, including born-digital materials)

Within such a layering structure, one can then ask if there exists a layer below which the functions

are sufficiently similar that they could be considered foundational to all three disciplines, and above which the disciplinary missions suggest specialization or even divergence. The lower four layers might populate such a foundation, comprising a common core to librarianship, archival studies, and museum curation.

Michael Seadle, from Humboldt University in Berlin (Germany), described his experience in transforming a traditional LIS school at Humboldt University into an iSchool. What is the difference? The LIS schools focus on professions and their core curricula, while the iSchools focus on a research curriculum and do not distinguish between professions, as the iSchools deal with “information and society” (by the way, that is the origin of the iSchool term, where the “i” of course stands for “information”). The intellectual challenge of iSchools is to detach the notion of a particular profession related to information from the notion of the information itself. Now that most of the information has become digital, the question is how can we conceptualize it, how can we interact with it, how can we “talk” to a machine holding the information? In order to build a common core curriculum we need to be able to understand basic things and identify the “common denominator” in digital information that can form the basis for a curriculum.

Workshop Small Group Discussion

In the final part of the Workshop, the participants divided in three groups and started a debate, trying to find (some) answers to the following questions (two questions for each group).

- How much Computer Science do we want (need) to teach? What basic skills do we want to teach?
- What other disciplines would be needed (in addition to Computer Science) ? What would be their priority?
- What is the common core? What kind of research and development (RTD projects) would best stimulate these common approaches?
- What is the role of Digital Curation in the process of convergence?
- How to deal with national and global perspectives? What is the role of International Professional Associations?
- How should the legacy of the past be handled whilst preparing for the future?

In the Discussion Groups there was general agreement about the inclusion in the core curriculum of general introductory or intermediate level Information Technology courses, but there was disagreement about the specifics and the level of details. Some members were very vocal about excluding and/or including high level computer science courses. As far as other possible/relevant courses are concerned, the list ranges from project management and communications to research methods and proposal/grant writings. The list also include: copyright/intellectual property rights, open access, marketing, and also discipline related courses that help introducing information professionals to specific fields such as law, health, biology, or other specialized scientific areas.

As often happens, at the end of the workshop there were possibly more open questions than at the beginning, which however does not detract from the benefits of discussing those issues in an open and diversified environment. As an outcome of the workshop it is planned to establish a wiki and/or a discussion forum about the competencies needed by information professionals in these three fields related to digital collections. Such a communication channel might possibly be sponsored by an international organization like IFLA (the International Federation of Library Associations and Institutions).

Conclusion

It is clear that the discussion of the convergence of education of information professional in archives, museums, and library and information science studies is just beginning. The workshop discussion revealed that the need for more information on career placement of the graduates in programs involved in convergence, the identification of the diversity of student background, further discussion of advances in information technology, and the need for preservation of institutional memory are seen as some of the more important elements that need further discussion and research. For example, the absence of data on placement of students after graduation makes it difficult to have a measure of the effectiveness of the current courses. It was concluded that in order to appropriately consider the issues related to the convergence of education for these three disciplines (librarianship, archives, and museum studies), one should consider the missions, motives, and roles of each profession; for each has its own historical context with origins in an analog world that affect their view of the emerging digital world. It was also observed that the three disciplines share some similarities in function, but they also exhibit differences, particularly in their attitudes toward access, and it does seem that at some level of abstraction, there may be "convergence." The increasing availability of digital materials in all three areas has encouraged some to wonder about the relationship between these three disciplines. The basic idea of a seven layers of convergence for librarians, archivists, and curators was suggested by Ron Larsen and deserves further discussion. It was found that the intellectual challenge of iSchools is to detach the notion of a particular profession related to information from the notion of the information itself. In order to build a common core curriculum for information professionals, we may need to focus on skills and knowledge fundamental to all the information professions based on identifying the "common denominator" in digital information that can form the foundation for the curriculum.

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