This study examines the educational backgrounds of full-time faculty members at a sample of ALA-accredited library schools in the United States. Data was gathered for 795 faculty members over a fifteen year period and changes in the composition of faculties with regard to educational background in library and information sciences were tracked.

The faculties of 33 library schools were studied. While the percentage of faculty with LIS doctorate degrees has increased, so has the percentage of faculty with no earned degree in LIS. This change has resulted in a sizable portion of LIS faculty coming from outside of the field, particularly in LIS schools with doctoral programs. The disciplines from which these faculty members come was analyzed over time. Implications for curriculum in LIS programs are discussed, along with recommendations for LIS programs.

Headings:

Library Science – Teaching
Library Schools – Curriculum
Library Schools – Faculty
Academic Degrees
CHANGES IN THE ACADEMIC BACKGROUNDS OF FACULTY IN LIBRARY AND INFORMATION SCIENCE PROGRAMS 1990-2005: IMPLICATIONS FOR CURRICULUM ISSUES

by
Sarah W. Stokes

A Master's paper submitted to the faculty of the School of Information and Library Science of the University of North Carolina at Chapel Hill in partial fulfillment of the requirements for the degree of Master of Science in Library Science.

Chapel Hill, North Carolina

November, 2005

Approved by:

___________________________
Jerry D. Saye
Introduction

The field of library science has undergone vast changes in recent years. The advent of electronic publishing, open access, and other technological advances have indeed shifted the role of the librarian as well as the reputation of the profession. At the same time, curricular shifts in the programs that train those who will work in the library field have brought about significant changes to the courses offered in those institutions.

The inclusion of “information science” courses and curricula in most of the nation’s schools for library education has affected the course of library science in the modern era. The trend of many library schools to shift toward predominantly information science-oriented curricula has resulted in an uneasy imbalance within departments. Studies indicate that the majority of students entering programs in library and information science (LIS) schools desire careers in libraries or similar settings. Recent graduates of LIS programs disproportionately seek careers in library science fields as compared to information science fields. Yet the trend in many prominent library schools is to offer fewer and fewer library–related courses in favor of expanding the course offerings in technical and theory-based areas. Likewise, new faculty hires have consisted almost entirely of researchers with a bent toward the theoretical and the majority of library science course offerings are delegated to adjunct faculty members not capable of mentoring or advising the large number of students consistently choosing the LS track of
study. Berry points out that students in library education are dissatisfied with their courses, that they feel ill-prepared for their first jobs out of school, and that retiring library-oriented faculty are too often replaced with information scientists (Berry, 2004). In contrast to this trend, applications at one such school have continued to indicate that entering students intend to pursue the curricular track emphasizing the skills and services used in library settings by a ratio of approximately nine to one. Given this tendency, a curriculum based predominantly on theory-based education and materials best suited to students interested in maintaining networks and designing user interfaces is unlikely to either satisfy or adequately prepare the majority of students passing through this type of institution. It should be stated that graduate education in the LIS fields has real-world consequences, given the future career choices of most graduates. Very few LIS graduates will be in career positions to develop theory. It therefore stands that a curriculum based in such theory at the expense of practical courses will not serve most graduates well.

How is it, then, that some of the nation’s oldest and most respected schools of library and information education have continued to channel their resources into a portion of the curriculum that serves a small proportion of students? Is this a phenomenon that is occurring in LIS programs across the nation and in all types of institutions? This paper will attempt to examine the trends within library and information science schools that contribute to this imbalance, particularly the increasing tendency of faculty members in LIS programs to have educational backgrounds entirely outside of the realm of LIS
studies. It is intended as the first in a series of investigations into the difficulties facing library education. Finally, it will attempt to make recommendations to the modern LIS school that might guide such departments to make faculty and curriculum decisions to better serve the students that make their existence possible in a changing field.
Literature Review

For years now, scholars have been writing about the changes in the library profession in the digital age. Some have offered the opinion that the library, and the librarian, are soon to become relics of a bygone age. The main thrust of this argument seems to be that in the future, information seekers will simply be able to search for, find, and use all of the material that they desire without any assistance. Computers will become so intelligent that it will no longer be necessary for humans to assist them, either in the organization or in the retrieval of information. This theory, however, is inherently flawed, and many more proponents of the library profession have argued against such claims, stating that although our roles may change, libraries and librarians are likely to be an ongoing fixture in society. As Billings notes, “The library, the librarian, and library education will all be needed tomorrow, whether in a physical or a virtual place; all should demand, stimulate, and produce quality in graduates, programs, services (Billings, 1995)”. Yet the availability of doctoral candidates in library science for potential faculty positions is scarce. In “The Coming Crisis in Education for Librarianship,” Seavey notes that over three recent years, there were only 99 MLS-holding doctoral applicants to these positions, and few of these had any actual work experience in libraries (Seavey, 2005). While this might seem a substantial number, when one considers the number of ALA-accredited library education programs to which these applicants might apply, the number is diluted so much as to be clearly insufficient. If each ALA-accredited program of library education were seeking to fill even two positions with a recent graduate, this
number would fall short of meeting that need. In addition, it denotes a change from years past when many library school faculty returned to teaching after some years as professional librarians, able to bring their experience in the field to their students in the classroom. A departure from this tradition will surely have serious implications for the education of librarians.

Boyce, of the Louisiana State University School of Library and Information Science, puts forth the argument that the institution that is perishing instead is, rather than libraries or the librarians themselves, library education. He claims that library education is slowly disappearing due to a lack of concern for its quality, and to a tendency to make decisions about the future of our educational institutions based on what is the cheapest fix, by those responsible for carrying it out (Boyce, 1994). American Library Association President Michael Gorman contends that libraries and library education are in danger now more than ever before, under attack by what he categorizes as three classes of threatening groups. He singles out bureaucrats, who threaten libraries with cost-cutting measures and a lack of understanding of the importance of libraries, technocrats, who believe that libraries must eventually be replaced with technological advances rather than assimilating these changes, and “technovandals”. This last class is said to pose a threat through an aim to break up the traditional culture of learning and replacing it with a “howling wilderness of unstructured, unrelated gobbets of ‘information’ and random images in which the hapless individual wanders without direction or sense of value (Gorman, 1994)”. With organizations such as the Kellogg Foundation selectively supporting and financing institutions
that renounce their library ties, it is no wonder that there is a rift in the field that threatens to destroy the profession of librarianship by destroying the education of librarians. Despite the assertions of a few well-placed and vocal individuals, all evidence points to the fact that librarianship continues to be a viable and popular profession and that the services traditionally provided by librarians, in addition to emerging roles, will continue to have a place in a changing society that can only be filled by those with appropriate background in the traditions and practices that library education has offered.

Billings further notes that whether in regard to the traditional library system or the new, evolving concept of libraries, only those trained in library education will be able to manage the library or other knowledge institution. He points out key areas such as selection, acquisition, organization, service, preservation, and instruction as areas where librarians are typically expert and which are necessary in the management of both traditional and new library models (Billings, 1995). He notes that those with backgrounds in computing or other similarly technical fields will likely not have the knowledge of how information seekers approach the resources they use or learn about the culture or methodologies of managing a traditional information system. Although the specifics and technical methods have evolved over time, the essential nature of the profession of librarianship is unchanged.

There is no doubt that the field of library and information studies is changing, though, and with that change comes change in the composition of library education faculties. Parts of the changes occurring in the makeup of LIS
faculties are a result of academic bias in the American university culture. As Crowley points out, modern American universities and institutions may see no problem with hiring only professors who subscribe to a particular point of view. Given this aspect of departmental life, it is all too possible for deans and tenured faculty never to recommend for positions candidates who disagree with their philosophies in LIS education (Crowley, 1999). Thus, it is possible for an approach to library education to die out due to bias, and not to the trends within the field. This is the type of situation that is possible in an era where less emphasis is placed on a background in the LIS fields when searching for new faculty candidates to teach in LIS schools. It is one of the changing aspects of library education that leads prominent professionals in the field to state that the future of library education is too important to be left to the educators. While ironic, the fact that tenured faculty hire their own combined with the possibility of this type of academic bias lends a grave element of truth to the statement.

It is possible that the tendency toward hiring faculty with backgrounds outside of the LIS field has accompanied the trend toward transforming library and information science programs into so-called “schools of information.” The perceived shift of the market away from traditional service in the direction of technology and depersonalization might result in fewer educators training LIS students in favor of network administrators and computer scientists. It is of note that the majority of these changes have taken place against the wishes of the affected library and information communities and without their input (Crowley, 1999). Perhaps in keeping with the principle of most state universities, including
those housing LIS programs, that higher public education is directly accountable to the state and citizens that it serves, such transformations without guidance from the professional communities are ill-advised. With a faculty of more diverse academic backgrounds comes the offering of a greater variety of courses. Indeed, over the last several decades, the number of course offerings listed in LIS program catalogs has increased substantially (Saye, 2002). However, the nature of this increase has come at an expense. Many new courses have been added in the technical and technological areas of LIS education, with a greater number of programmers and systems analysts available to teach them. However, a number of traditional library courses have been reduced or eliminated along the way. Given the number of students intending to pursue traditional library careers, it is important to note that these larger course offerings may, in fact, signal a decrease in the number of satisfactory courses for the majority of students in LIS programs. Gorman notes that:

“The list of the courses taught and research interests of those faculty include a number of library topics - school libraries, subject access, collection management, descriptive bibliography, and so forth - but these are heavily outweighed by topics such as (chosen from many at random) user modeling, information visualization, human-computer interaction, business taxonomies, strategic intelligence, social and organizational informatics, computational linguistics, electronic commerce, and computer programming for information management. It is not without significance that [LIS schools have] a large number of adjunct faculty, almost all practicing librarians, who teach courses in, for example, law libraries, collection development, library automation, Slavic librarianship, music librarianship, bibliographic instruction, and storytelling. The culture and individual interests of LIS faculty are, increasingly, marginalizing education in librarianship in favor of information science and other computer-related interests and courses.”
and that this does not denote a change for the positive in the realm of library education (Gorman, 2004). Gulyas, Kniffel, Olesh, and Newman all write about the various deficiencies in current library education. Most analyses of the problem agree that the solution lies in a profession-wide effort to shape library education and to ensure that doctorate-holding librarians are hired to educate those who will take library jobs in the future, lest our profession, and appropriate education for that profession, die out entirely.
Rationale

In addressing issues of curriculum in LIS institutions, it is first necessary to examine the backgrounds of faculty members teaching within those schools. All issues surrounding which courses are offered to students and their frequency, as well as those surrounding the hiring of new faculty – thereby contributing to the overall atmosphere and emphasis of the program – have their roots in the composition of the faculty body as a whole. If a faculty is deficient in an area of expertise, that deficiency will ultimately be passed on to the students of the program via a lack of consistent instruction in that area. This is not a problem that can be remedied, as many programs have attempted, by delegating that subject matter to various adjunct and part-time faculty members as they are available to teach. This breeds an inconsistency in instruction, as well as a potential to omit the subject area altogether if a willing adjunct cannot be located. Cohorts of students are potentially shortchanged when courses of core materials, which previously have been the responsibility of full-time faculty members, are put in a place of low priority because of a lack of faculty expertise or interest in teaching them. Likewise, a growing discrepancy in the interests and backgrounds of LIS faculty members and the interests and ambitions of their students is likely to be to the detriment of all members of the LIS community.

To investigate this issue and determine the nature of the changes in LIS curricula, it is of high priority to examine the faculty members at the institutions in question. As a first step in this process, this study seeks to understand the educational and professional backgrounds of faculty members in LIS programs in
the United States over time. Of primary interest is the percentage of faculty members holding terminal degrees in the library and information science fields, as well as the change in this percentage in recent history. Another dimension of faculty background that might prove useful to those studying this issue is the disciplines from which the degrees of those faculty members not having LIS backgrounds are derived. The nature of the education of these faculty members, as well as its change over time, may prove enlightening in the changes occurring in LIS education in the United States. An additional aspect of faculty description that is of interest lies in the number of adjunct faculty employed by each institution to conduct coursework for LIS students, since this is an indicator of the availability of instructors for various topics within the LIS curriculum.
Methodology

The analysis of the faculty composition of ALA-accredited schools of library and information science began with classification of each program into certain strata. The initial pool of programs was limited to those colleges and universities with ALA-accredited programs whose founding dates fall before the period of interest for this analysis and whose schools will continue to remain open during the 2006-2007 term, and for whom data reported to the 2004 Association for Library and Information Science Education (ALISE) Statistical Report could be derived. For failure to meet these conditions, the programs at Clark Atlanta University and the University of Denver were excluded from the analysis. This yielded an initial pool of 55 ALA-accredited programs.

The programs were first divided into subgroups based on whether or not a Ph.D. program in the LIS field is offered at the institution. The rationale for this division is that programs with programs to train doctoral level LIS students could ostensibly focus on retaining professors with an interest skewed toward academic research topics in order to support students interested in entering academia. Programs focusing entirely on master’s-level students may tend to focus instead on service-based curricula to better serve the needs of students bound for work in libraries and other knowledge institutions. It may be of interest to compare faculty trends between these two types of programs. There were 29 programs found to offer doctoral programs and 26 not offering the Ph.D. (Figure 1).
The next subdivision was created based on the size of the program, from the number of students enrolled according to the 2004 *ALISE Statistical Report*. This division was made in order to separate institutions with potentially large class sizes from those with smaller enrollments and class sizes, and so the data used for placement of each program into this stratum was determined to be the total number of enrolled persons, rather than the full-time equivalency of all students in the department. The number of students in each program, regardless of the number of credits for which the student was enrolled, was determined and the entire set of each of the two prior subgroups (Ph.D.-granting vs. not) was compared, and the mean number of enrolled students in each group was calculated. Each group was found to have a clear division between schools with a number of students greater than the mean for its subgroup and those with a number of students less than the subgroup mean. As a result, this number was used as the cutpoint for further division (Figure 1).

Once the size of the programs was determined, a further division was made in order to separate programs with a high proportion of distance-learning or other non-traditional students from those with primarily on-campus students in a traditional classroom setting. This distinction, based on the number of full-time equivalent students classified as off-campus in the 2004 *ALISE Statistical Report*, is made due to the implications for faculty that a school serving primarily distance-learning students might have – a greater number of faculty in those institutions might be part-time or adjunct faculty, or perhaps even faculty at other institutions or departments teaching distance-learning courses online. Given that
this analysis seeks to examine faculty composition with its implications for curriculum issues, schools with significant proportions of non-traditional students were excluded from the analysis. In all, there were 14 programs falling into that classification across all other strata which were excluded (Figure 1).

Next, in order to better isolate a group of programs within a geographic area, the programs to be analyzed were limited to those residing at universities within the United States. To this end, seven programs in Canada were excluded from the analysis. Finally, since the preponderance of documentation available for the school at the University of Puerto Rico was found to be in Spanish, its program was also excluded from the study. This led to a final group of 33 LIS programs (Table 1).

For each of the 33 programs selected, data were gathered from several sources. These include the program’s current website, the 2004 *ALISE Statistical Report*, and ALISE membership directories for the years 1989-1990, 1995-1996, and 1999-2000. The study originally sought to gather data from the 1984-1985 *ALISE Directory*, however, this publication differed in form from subsequent editions by not including information about the individual faculty members for each program.

The full-time faculty of each school for academic year 2004-2005 were gathered from the current website of each program being evaluated. Information regarding the faculty member’s educational and professional background was gathered from his or her curriculum vitae whenever such a document was
Figure 1.

55 ALA Accredited Library Schools

With Ph.D

Without Ph.D

Large Schools

Small Schools

Large Schools

Small Schools

Alabama; Albany; Arizona; British Columbia; California - Los Angeles; Drexel; Emporia; Florida State; Illinois; Indiana; Long Island; McGill; Maryland; Michigan; Missouri-Columbia; Montreal; UNCCH; North Texas; Pittsburgh; Rutgers; Simmons; Syracuse; Tennessee; Texas-Austin; Texas Woman's; Toronto; Washington; Western Ontario; Wisconsin - Madison

Alberta; Buffalo; Catholic; Clarion; Dalhousie; Dominican; Hawaii; Iowa; Kent State; Kentucky; Louisiana State; North Carolina - Greensboro; North Carolina Central; Oklahoma; Pratt; Puerto Rico; Queens College; Rhode Island; St. Johns; San Jose State; South Carolina; South Florida; Southern Connecticut; Southern Mississippi; Wayne State; Wisconsin - Milwaukee

Drexel; Emporia; Florida State; Illinois; Indiana; Long Island; No. Texas; Pittsburgh; Simmons; Syracuse; Texas Woman's; Toronto

Drexel; Emporia; Illinois; Indiana; Long Island; Pittsburgh; Simmons; Syracuse; Texas Woman's; Toronto

Florida State; No. Texas

Dominican; Kent State; Queens College; San Jose State; South Carolina; South Florida; Wayne State

Dominican; Queens College; South Carolina

Kent State; San Jose State; South Florida; Wayne State

Catholic; Clarion; North Carolina - Greensboro; So. Connecticut; Wisc. - Milwaukee

Non-trad.

Trad.

Non-trad.

Non-trad.
Table 1.

<table>
<thead>
<tr>
<th>School</th>
<th>Founded</th>
<th>Degree(s) Offered</th>
<th>Students</th>
<th>Faculty</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Master's</td>
<td>Ph.D.</td>
</tr>
<tr>
<td>Alabama</td>
<td>1971</td>
<td>MLIS, Ph.D.</td>
<td>172</td>
<td>5</td>
</tr>
<tr>
<td>Albany</td>
<td>1926</td>
<td>MSIS, Ph.D.</td>
<td>217</td>
<td>33</td>
</tr>
<tr>
<td>Buffalo</td>
<td>1966</td>
<td>MLS, MA</td>
<td>281</td>
<td></td>
</tr>
<tr>
<td>California - Los Angeles</td>
<td>1958</td>
<td>MLIS, Ph.D.</td>
<td>162</td>
<td>26</td>
</tr>
<tr>
<td>Dominican</td>
<td>1969</td>
<td>MLIS</td>
<td>730</td>
<td></td>
</tr>
<tr>
<td>Drexel</td>
<td>1892</td>
<td>MSLIS, MSIS, Ph.D.</td>
<td>479</td>
<td>37</td>
</tr>
<tr>
<td>Emporia</td>
<td>1951</td>
<td>MLS, Ph.D.</td>
<td>424</td>
<td>22</td>
</tr>
<tr>
<td>Hawaii</td>
<td>1965</td>
<td>MLIS</td>
<td>129</td>
<td></td>
</tr>
<tr>
<td>Illinois</td>
<td>1893</td>
<td>MS, Ph.D.</td>
<td>452</td>
<td>48</td>
</tr>
<tr>
<td>Indiana</td>
<td>1949</td>
<td>MLS, MIS, Ph.D.</td>
<td>611</td>
<td>37</td>
</tr>
<tr>
<td>Iowa</td>
<td>1967</td>
<td>MALIS</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>Kentucky</td>
<td>1932</td>
<td>MLSIS</td>
<td>236</td>
<td></td>
</tr>
<tr>
<td>Long Island</td>
<td>1960</td>
<td>MSLIS, Ph.D.</td>
<td>473</td>
<td>46</td>
</tr>
<tr>
<td>Louisiana State</td>
<td>1931</td>
<td>MLIS</td>
<td>188</td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td>1965</td>
<td>MLIS, Ph.D.</td>
<td>312</td>
<td>13</td>
</tr>
<tr>
<td>Michigan</td>
<td>1926</td>
<td>MSI, Ph.D.</td>
<td>279</td>
<td>28</td>
</tr>
<tr>
<td>North Carolina Central</td>
<td>1939</td>
<td>MLS, MIS</td>
<td>171</td>
<td></td>
</tr>
<tr>
<td>North Carolina - Chapel Hill</td>
<td>1931</td>
<td>MSLIS, MSIS, Ph.D.</td>
<td>261</td>
<td>43</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>1929</td>
<td>MLIS</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>1962</td>
<td>MSIS, Ph.D.</td>
<td>453</td>
<td>100</td>
</tr>
<tr>
<td>Pratt</td>
<td>1890</td>
<td>MSLIS</td>
<td>249</td>
<td></td>
</tr>
<tr>
<td>Queens College</td>
<td>1955</td>
<td>MLS</td>
<td>499</td>
<td></td>
</tr>
<tr>
<td>Rhode Island</td>
<td>1961</td>
<td>MLIS</td>
<td>206</td>
<td></td>
</tr>
<tr>
<td>Rutgers</td>
<td>1927</td>
<td>MLIS, Ph.D.</td>
<td>328</td>
<td>39</td>
</tr>
<tr>
<td>S. Mississippi</td>
<td>1957</td>
<td>MLIS</td>
<td>150</td>
<td></td>
</tr>
<tr>
<td>Simmons</td>
<td>1926</td>
<td>MS, Ph.D.</td>
<td>646</td>
<td>13</td>
</tr>
<tr>
<td>South Carolina</td>
<td>1972</td>
<td>MLIS</td>
<td>420</td>
<td></td>
</tr>
<tr>
<td>St. Johns</td>
<td>1937</td>
<td>MLS</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>Syracuse</td>
<td>1896</td>
<td>MLIS, Ph.D.</td>
<td>439</td>
<td>49</td>
</tr>
<tr>
<td>Texas Woman's</td>
<td>1928</td>
<td>MLIS, Ph.D.</td>
<td>482</td>
<td>17</td>
</tr>
<tr>
<td>Texas - Austin</td>
<td>1948</td>
<td>MSIS, Ph.D.</td>
<td>266</td>
<td>37</td>
</tr>
<tr>
<td>Washington</td>
<td>1911</td>
<td>MLIS, Ph.D.</td>
<td>305</td>
<td>23</td>
</tr>
<tr>
<td>Wisconsin - Madison</td>
<td>1906</td>
<td>MA, Ph.D.</td>
<td>181</td>
<td>19</td>
</tr>
</tbody>
</table>

available online. Pertinent data, including the degrees received by a subject and the subjects therein, current employment status, and previous academic
appointments for the time period of interest to the study were recorded and placed into tabular format. This was completed for all full-time faculty listed under each program’s faculty directory. When a curriculum vitae was not available on the program’s site, a web search was performed to search for other online documentation of a faculty member’s educational and professional background. This data was often to be found on the individual’s personal web site, on the web site of an institution that previously employed the faculty member, or in documentation where the individual was listed as an author or a speaker. The individual’s degrees were listed according to the type of degree (MLS, MBA, Ph.D., e.g.) and the field in which the degree is based. In addition, the institution by which the faculty member was employed was recorded in a separate column for each of the four periods of interest to this study. If an individual began his or her career during the study period, or if his or her retirement occurred prior to the end of the study period, the applicable cells were left blank.

For the faculty listings for 1990, 1995, and 2000, the corresponding *ALISE Membership Directory* was consulted. Beginning with the 1990 issue, each full-time faculty member’s name and institution were added to the table. For each faculty member, subsequent years’ membership directories were searched to ascertain that individual’s place of employment during later years. Each institution employing a faculty member during the time periods of interest was added to that individual’s record in the table. This procedure was repeated for all full-time faculty listed in the 1995 and 2000 ALISE directories. Care was taken
that no records were duplicated. When a subject’s surname appeared to have changed between data points, care was taken to merge all records for a subject so that the individual’s employment history during the period of interest could be clearly tracked.

Once an individual’s academic employment record during the time periods of interest was recorded, the individual’s background was researched. Information about the individual’s earned degrees and their fields was added to the table. This information was derived from the faculty member’s curriculum vitae, where available, or from other academic and professional documents found on the individual’s web presence, institutional records, or other documentation displaying relevant information. Every effort was made to ensure that full information about a subject’s academic and professional background was included in the dataset.

When the dataset was completed, some descriptive analyses were done. First among these was the creation of an index variable intended to indicate the degree to which the individual’s educational background related to library and information science. Two binary variables were created to build this index. If an individual had an earned degree of any kind in the library and information science field (MLS, MSI, Ph.D., e.g.), the subject was assigned a score of one for this indicator. Otherwise, the subject was assigned a score of zero. Since the terminal degrees of LIS faculty are known to vary by subject, a second binary variable was created to indicate training at the doctoral level in an LIS field. Individuals possessing a doctorate in library or information science, including
Ph.D. and DLS degrees, were assigned a score of one for this variable, with all other individuals receiving a score of zero. The two indicators were added to produce an index score with resulting values of zero, one, or two. Subjects for whom data were missing were assigned a score of seven for the indicator variables and excluded from the analysis. The overall percentage of faculty members at each level of the index variable was determined. In addition, the number and proportion of subjects in each stratum over time was examined.

Next, the records of faculty for whom educational background was entirely outside of the realm of the LIS field were examined. These subjects were analyzed to determine the fields represented by these records. Categories were created for the various fields, including education and communication, social sciences, natural sciences and mathematics, humanities and the arts, business and economics, computer science, and engineering. The number of faculty having background in each category was determined. Representation of each category in LIS faculties over time was also evaluated. Those fields in which representation on LIS faculties has changed significantly over the time period of interest were further examined and their contributions to LIS education evaluated.

Finally, faculty composition and its change over time were evaluated as a function of the type of program offered at each institution. Schools were compared based on the size of their programs and whether or not a doctoral program is offered by the institution. The percentages of faculty members with and without LIS educational backgrounds were compared across these strata.
Discussion

In all, 33 programs of LIS education were evaluated for faculty composition. Nineteen of these programs offer doctoral degrees, 14 do not. Twelve programs have enrollments larger than the mean for their subgroups, 21 programs have enrollments less than the mean. The institutions go by a variety of titles (Appendix A) and call their LIS master’s degrees by a variety of names: MLS, MIS, MLIS, MSLS, MSIS, MSLIS, MALIS, MSI, MS, and MA. The founding dates of the LIS departments in these institutions range from the 1890s to the 1970s. They are located in public and private universities. The schools represent all geographic areas of the United States and are in settings from very urban to very rural. Their academic calendars are either semesters or quarters. All of these schools comprise a representative sample of LIS education in the United States.

The educational and employment histories of 795 full-time faculty members at these institutions for a period of more than 15 years were examined for this study. This dataset represents an exhaustive compilation of the academic and professional backgrounds of a large percentage of LIS educators in the United States. For 15 individuals (2%), sufficient data regarding educational background could not be located. These individuals were excluded from the analysis. The remaining 780 individuals had varying levels of experience and expertise in the LIS field. In this sample, 390 (49%) individuals were found to possess a Ph.D. in the LIS field. Another 218 (27%), although their doctorates were outside of the LIS field, had an earned degree, usually an
MLS, in the LIS field. Finally, 172 individuals (22%) were found to have no earned degrees related to library or information science (Figure 2).

The proportion of faculty members with and without educational background in library and information science was found to have changed noticeably over time. One positive change is the increase in the number of faculty members holding doctorates in LIS from 159 (45%) in 1990 to 281 (62%) in 2005. During that same time period, the percentage of faculty with no background at all in library or information science doubled, from 12% to 24%. At the same time, the number of faculty members with some educational background in LIS, but no LIS doctorate, has declined from 42% to 12% (Figure 3). In most cases, the individual possessed a master’s degree in library science, but a doctorate in another field. The range of fields represented by these other degrees is wide and encompasses all areas of academic expertise, although education, English, history, and literature are the most prevalent findings in this group.
Figure 2.

LIS Education in Faculty Backgrounds

- Ph.D LIS: 390 (49%)
- Ph.D: 172 (22%)
- Master’s in LIS, no LIS: 218 (27%)
- No LIS Degree: 15 (2%)
- Unknown: 15 (2%)
Figure 3. Distribution of Academic Backgrounds of LIS Faculty, by Degree Type

<table>
<thead>
<tr>
<th>Year</th>
<th>Ph.D LIS</th>
<th>LIS Master's, no LIS Ph.D</th>
<th>No LIS Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>45</td>
<td>42</td>
<td>12</td>
</tr>
<tr>
<td>1995</td>
<td>52</td>
<td>31</td>
<td>16</td>
</tr>
<tr>
<td>2000</td>
<td>57</td>
<td>22</td>
<td>19</td>
</tr>
<tr>
<td>2005</td>
<td>62</td>
<td>12</td>
<td>24</td>
</tr>
</tbody>
</table>
When considering the fields in which the doctoral degrees of faculty not holding LIS degrees originate, a great diversity of educational background is seen. Education, communication, the natural and social sciences, business, humanities, the arts, and computer science are all represented on LIS faculties (Figure 4). The proportion of faculty without LIS degrees whose backgrounds lie in certain fields has remained virtually consistent over time. These fields include the social sciences, natural sciences and mathematics, humanities and fine arts, and business and economics. However, a substantial change was noted in the three remaining categories: education/communication, computer science, and engineering.

During the earliest time period examined for this study, the largest portion of non-LIS degrees among faculty at LIS schools were held in the fields of education and communication, 48% in 1990. At the same time, computer science accounted for only 4% and engineering for none of these degrees. While all other fields remained virtually constant, these three have experienced tremendous changes during the last fifteen years. Education has steadily declined, and computer science steadily grown, so that in 2005 only 12% of non-LIS degrees were in education, while 26% were in computer science and 12% in engineering (Figure 5). This represents a 75% decrease in education and greater than six-fold growth in computer science and engineering among the backgrounds of faculty teaching at schools of information and library science.
Figure 4.

Distribution of Doctoral Degrees in Non-LIS Fields, by Year

<table>
<thead>
<tr>
<th>Field</th>
<th>1990</th>
<th>1995</th>
<th>2000</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education/Communication</td>
<td>48</td>
<td>26</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Social Sciences</td>
<td>22</td>
<td>24</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>Natural Sciences/Mathematics</td>
<td>13</td>
<td>13</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Humanities/Arts</td>
<td>4</td>
<td>4</td>
<td>5</td>
<td>11</td>
</tr>
<tr>
<td>Business/Economics</td>
<td>9</td>
<td>9</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>Computer Science</td>
<td>4</td>
<td>13</td>
<td>23</td>
<td>26</td>
</tr>
<tr>
<td>Engineering</td>
<td>0</td>
<td>11</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>
Figure 5.

Distribution of Non-LIS Doctoral Degrees, by Field

<table>
<thead>
<tr>
<th>Field</th>
<th>1990</th>
<th>1995</th>
<th>2000</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Education</td>
<td>48</td>
<td>26</td>
<td>20</td>
<td>12</td>
</tr>
<tr>
<td>Computer Science</td>
<td>4</td>
<td>13</td>
<td>23</td>
<td>26</td>
</tr>
<tr>
<td>Engineering</td>
<td>0</td>
<td>11</td>
<td>12</td>
<td>12</td>
</tr>
</tbody>
</table>
The implications of this shift are enormous and not necessarily positive. In addition to having a rapidly growing segment of LIS faculty who have no educational background in the field in which they teach, the current picture of teaching LIS faculty includes an exponentially-growing number of professors whose academic background is polarized toward a field far different from that which previously represented the largest portion of faculty without LIS education. Library and information science and education have a shared tenet of emphasis on service to the larger community which is not inherently present in the fields of computer science and engineering. Service is a vital component of any career in the LIS field, and as such must remain an integral part of LIS education. A shift in faculty background in service-oriented fields has strong implications for curriculum. LIS programs may need to institute careful review procedures to ensure that this principle is consistently emphasized in their curricula.

An additional analysis that yielded interesting results was found when comparing faculty shifts in institutions of large and small size, with and without Ph.D. programs. A positive change of note is that the increase in the number of faculty members with LIS doctorates is uniform across the programs. Regardless of enrollment numbers or the presence of a doctoral program, most individual programs and all examined strata were found to have increased the number of faculty members with doctoral degrees in the LIS field over the study period. This was not unexpected, as the availability of LIS doctoral programs has become greater over the years during which this faculty sample is likely to have received its education.
Another interesting aspect of this analysis emerged when it became apparent that schools more likely to have professors without LIS academic backgrounds are those with Ph.D. programs. Schools with master's-only programs, regardless of enrollment, were highly unlikely to have a substantial number of faculty members without degrees in the LIS field. In fact, the number of non-LIS faculty teaching in these institutions has decreased during the time periods examined in this study. Conversely, it has increased substantially in the programs offering Ph.D. degrees (Figure 6). This is perhaps the most significant finding of this study and one with far-reaching implications. In some schools, the proportion of non-LIS faculty has more than doubled in the past 15 years. Moreover, this has occurred in the schools most likely to be educating and preparing those who will lead in library and information science education for many years to come.
Figure 6: Percentage of Non-LIS Doctoral Degrees, by Program Type.
Recommendations

An aim of this study is to provide the modern library and information science school with recommendations as to how some problems facing LIS education might begin to be addressed. The LIS education community cannot continue to ignore the growing shortcomings within its own walls with regard to curriculum and faculty composition issues. These are issues that should be faced beginning now and on an ongoing basis as the field of library and information studies grows and changes. The needs and interests of the consumers of LIS education programs – that is to say, the students – must be considered and respected. With these things in mind, the following recommendations are made:

1. Library and information science schools must strive for balance in the backgrounds and interests of the faculty they hire. In the recent past, the emphasis has been placed on replacing faculty departing after retirement with developers of new information theory. While this area is important, it contributes little to the education of many of the students in these professional schools. The dilution of the influence of LIS principles with a pool of faculty members whose experience and interests are grounded in other fields is a trend whose repercussions will be felt in the field for some time. LIS schools must make a concerted effort to recruit and hire new faculty with a strong grounding in library studies, both to serve the students whose tuition makes their operation possible and to create an
atmosphere in which the profession sought by its graduates can flourish and mature.

2. Curriculum at the master’s level must be revisited and necessary adjustments made to ensure that it remains up-to-date and relevant. This is of the utmost importance to ensure that tomorrow’s LIS professionals are appropriately, and thoroughly, trained. Master’s students are the primary consumers, and therefore financers, of the LIS school. If their needs fail to be met, they may seek appropriate education elsewhere, and if appropriate education is not available, it will be the profession that suffers. This must be addressed in the curriculum. New courses may need to be added to meet the needs of the LIS professional in an ever-changing technological setting and to provide students with the practical skills needed to be competitive in both traditional and future employment settings. However, courses in areas such as cataloging and classification, collection development, and instruction remain relevant to the careers pursued by many LIS graduates and should not be replaced by new courses focusing on new technologies and practices. Traditional courses can be updated to provide access to practical experience with and knowledge of emerging technologies that affect the LIS professions.

3. LIS schools must find ways to recruit more library-oriented Ph.D. students into programs. Many of the doctoral programs in today’s LIS schools are full to overflowing with students pursuing information research, but there is a dearth of available library-focused doctoral students, hardly enough to
meet the demand of LIS schools with open faculty positions (Seavey, 2005). There is research to be done in the library field, and there are still faculty members willing and able to advise potential library science candidates, and there are faculty spots that need desperately to be filled with librarians, yet the students aren’t being recruited to fill the spots. Potential doctoral students can be recruited from the population of professional librarians with years of practical experience. Perhaps many find the prospect of doctoral study daunting. Perhaps master’s-level students are unaware of what is seen as a crisis for education in their field. Perhaps they are unsure as to what doctoral study in library science involves, or perhaps they feel unwelcome in the information-dominated programs they observe. LIS programs must find ways of overcoming these barriers to recruiting greater numbers of doctoral students whose interests lie in library-oriented areas and whose ambitions include teaching library-related subjects for two reasons. They need to make certain that the field of LIS education has appropriately trained future faculty members to meet students’ needs. They also must take an active role in making sure that their own staffing needs will be met in order to sustain the sizable student bodies that have grown within their walls.

4. Finally, LIS schools and their associated faculty and students need to apply themselves to the task of decreasing the rift between the two perceived sides of LIS education – library science and information science. The two dimensions of the LIS field are more alike than different.
The notion that one or the other is inadequate for educating students in any area of the field is unfounded. When feuding occurs, it provides a distraction for a more insidious change – the replacement of LIS faculty with faculty from other fields. This changes the very nature of the knowledge passed on within LIS education programs, and it threatens to alter permanently the landscape within the modern knowledge professions.
Conclusion

For those interested in the future of libraries and especially of library education, this study and its findings should serve as both a warning and a call to action. If tomorrow’s LIS educators are themselves being trained by those without academic background in library and information science, then to whom will the next generation be looking for guidance? This study shows a noticeable shift in the overall composition of the faculties that educate a large percentage of the future LIS workforce in the United States. If the trend continues, the very nature of library and information studies may be altered. There is a great deal of research remaining to be done to investigate the issues facing LIS education.

First, research must be done to determine what motivation exists for instituting practices that may detract from the very values – service, tradition, scholarship, and character – upon which LIS programs are founded. The fact that the institutions which have demonstrated the most consistent adoption of the practice of hiring faculty without LIS backgrounds to educate LIS students are those which grant doctoral degrees may explain a component of that motivation. The desire for prestige and recognition as institutions of research can be a strong motivator. It brings with it the possibility of multi-million dollar corporate sponsorships and research grants, accompanied by the opportunity to test the latest technological equipment and software in order to further scholarly research. For the ambitious and business-minded administrator, these may seem to be the golden ring for which their schools have been reaching. But at what cost? Ultimately, the changes brought about in the quest for that goal may
yield unanticipated results – for example, the exodus of students to institutions
that are better aligned with their goals.

Next, further investigation of the academic and professional experiences
of LIS faculty members may provide valuable insight into the changing nature of
LIS education. A study of the length of professional experience in the LIS field
held by faculty members at a series of points in time could accompany this study
in attempting to more fully describe the backgrounds of those teaching in LIS
schools over time. Additional aspects that might prove useful to study include
analysis of the content of courses taught by faculty with and without LIS degrees,
survey data to determine any effects on the academic advising workload of
faculty with varying LIS backgrounds, the changes in course offerings at LIS
schools over time, and comparison of U.S. schools with those in other areas of
the world.

Another avenue of investigation involves examining the current status of
LIS teaching as it relates to promoting the value of service to students. Careers
in the LIS field are often careers of service. They involve a great deal of
interaction with user populations of various types and with a wide range of needs.
In order to effectively serve those populations, an ethic of service must be
instilled during preparation for their careers. If professionals are entering the LIS
workforce without this value, the nature of the profession will unquestionably
change. Research in this area could include studies to determine whether
preparation of recent graduates by LIS curricula meets the expectations of
employers in the LIS profession.
LIS programs, and those in charge of them, must not forget what their primary purpose has been, is, and will continue to be. They are professional schools, designed to educate and train professionals for careers in the library and information field. The settings may vary. The titles by which their students may be known in their careers may change. The skills and practices that become a part of the LIS professional’s repertoire have been evolving for centuries, but the nature of the profession remains largely unchanged. It is grounded in service, practical knowledge, and above all the notion that knowledge – and not merely disjointed fragments of information, but the understanding that comes from synthesis and contextual awareness of facts – is a commodity that is to be guarded, cultivated, and made available to all those who would seek it. It is the responsibility of library and information education to ensure that this ethic endures, and to appropriately train and serve those who will work to preserve it.
References


14. Saye, J. D. (2002). Where are we and how did we get here? or, the changing place of cataloging in the library and information science curriculum: causes and consequences. *Cataloging & Classification Quarterly, 34*(1-2), 121-143.


Appendix

List of LIS Schools included in the study and their websites

1. University of Alabama, School of Library and Information Studies. 
   http://www.slis.ua.edu/

2. State University of New York – Albany, School of Information Science and Policy. 
   http://www.albany.edu/sisp

3. State University of New York – Buffalo, School of Informatics. 
   http://informatics.buffalo.edu/

4. University of California – Los Angeles, Graduate School of Education and Information Studies. 
   http://is.gseis.ucla.edu/

5. Dominican University, Graduate School of Library and Information Science. 
   http://www.gslis.dom.edu/

6. Drexel University, College of Information Science and Technology. 
   http://www.cis.drexel.edu/

7. Emporia State University, School of Library and Information Management. 
   http://slim.emporia.edu/

8. University of Hawaii, School of Library and Information Science. 
   http://www.hawaii.edu/slis

9. University of Illinois, Graduate School of Library and Information Science. 
   http://alexia.lis.uiuc.edu/

10. Indiana University, School of Library and Information Science. 
    http://www.slis.indiana.edu/
11. University of Iowa, School of Library and Information Science.
   http://www.uiowa.edu/~libsci

12. University of Kentucky, School of Library and Information Science.
   http://www.uky.edu/CIS/SLIS

13. Long Island University, Palmer School of Library and Information Science.
   http://cics.cwpost.liu.edu/

14. Louisiana State University, School of Library and Information Science.
   http://slis.lsu.edu/

15. University of Maryland, College of Information Studies.
   http://www.clis.umd.edu/

16. University of Michigan, School of Information. http://www.si.umich.edu/


19. University of Oklahoma, School of Library and Information Studies.
   http://www.ou.edu/cas/slis

20. University of Pittsburgh, School of Information Sciences.
    http://www.sis.pitt.edu/

21. Pratt Institute, School of Information and Library Science.
    http://www.pratt.edu/sils

22. City University of New York – Queens College, Graduate School of Library and Information Studies. http://qcpages.qc.cuny.edu/GSLIS


25. St. John’s University, Division of Library and Information Science. [http://new.stjohns.edu/academics/graduate/liberalarts/departments/library](http://new.stjohns.edu/academics/graduate/liberalarts/departments/library)

26. Simmons College, Graduate School of Library and Information Science. [http://www.simmons.edu/gsis](http://www.simmons.edu/gsis)

27. University of South Carolina, School of Library and Information Science. [http://www.libsci.sc.edu/](http://www.libsci.sc.edu/)

28. University of Southern Mississippi, School of Library and Information Science. [http://www.usm.edu/slis](http://www.usm.edu/slis)

29. Syracuse University, School of Information Studies. [http://www.ist.syr.edu/](http://www.ist.syr.edu/)

30. University of Texas – Austin, School of Information. [http://www.ischool.utexas.edu/](http://www.ischool.utexas.edu/)

31. Texas Woman’s University, School of Library and Information Studies. [http://www.twu.edu/cope/slis](http://www.twu.edu/cope/slis)
