

## SUMMARY AND COMPARATIVE ANALYSIS

by

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In the chapter, I will use the data reported in this and previous editions to comment on the health and shape of LIS education. The fact that data from the schools has been collected over 17 years makes it possible to discern some trends and to perceive incipient changes.

In the data reported here, it is clear that the schools are providing education for more students, albeit with little or no increase in full-time tenure track faculty. Faculty growth has been in part-time and adjunct faculty. The schools are offering more courses and a greater variety of them to more levels of education. Student growth in undergraduate and "other" Master's programs is pronounced and merits closer examination. The schools are experimenting more determinedly with distance education and new delivery methods. This chapter highlights these trends and calls attention to some key statistics from the *Report*.

### **Faculty**

The average faculty size for all reporting schools has held fairly constant at 11 faculty members per school for the past ten years. Of the 56 schools reporting this year, one third report full time faculty of nine or fewer; fifteen percent (eight schools) enjoy faculty sizes of 15 or more. A growing number of adjunct faculty are reported -- 493 for 56 schools with an estimated FTE of 158. Sineath points out that, in terms of individuals, part time faculty account for nearly 45 percent of the total number of faculty.

Ten years ago, the male to female ratio on the faculty was 55:45; the ratio has changed little by little, mostly at the junior faculty end so that now it is 50:50. The ratio of deans and directors continues unchanged at 60 percent male and 40 percent female.

The leadership spot seems a volatile position in LIS schools. Twenty-six percent of the schools reported a change in leadership this past year. In the past five years, as Sineath notes in his chapter, more than 80 percent of the schools have received new executive officers. Salaries for deans and directors ranged from \$45,000 to \$180,000 for fiscal year appointments and between \$52,700 and \$128,388 for academic year appointments.

Of the new assistant professors appointed this past year in the 54 reporting schools, twenty are female and eleven male; twenty-six were white and five were either Black, Asian, Hispanic or Pacific Islander. Of 533 faculty reported by 48 schools, 85 percent are white; six percent are Black; five percent are Asian or Pacific Islander; two percent are Hispanic and 0.5 percent are American Indian.

Sixteen of the new assistant professors were less than 45 years in age and fourteen were over (one was undesignated). As has been true for the past three years, nearly a third of the faculty as a whole are 55 or older (thirty-two percent); twenty-three percent are younger than 45 and the majority (46 percent) are between 45-54. Nearly two-thirds of the faculty are tenured; this figure has shown little variation in the past three years.

## Summary

The average salary for new assistant professors with academic year appointments was \$40,800 with males earning nearly \$4,000 more on the average. Reasons for this discrepancy unrelated to gender may exist (Sineath points out, for example, more male new assistant professors possess the doctorate than is the case for females). Average faculty salaries for the academic year for all faculty ranks compared to average salaries for all full time faculty for the same time period at public and private universities (taken from the *Chronicle of Higher Education*, 1996 - <http://thisweek.chronicle.com/almanac/almfact4.html>) were as follows:

**Table VI-1**  
**Average Faculty Salaries**  
**Fall 1996**

<b>Rank</b>	<b>LIS Salaries</b>	<b>Public Universities</b>	<b>Private Universities</b>
Assistant Professor	\$41,705	\$41,219	\$45,941
Associate Professor	50,562	48,855	54,734
Professor	67,637	67,853	82,279

LIS faculty appears to be in line with salaries at public universities but considerably behind their colleagues at private universities. Male salaries exceed female salaries at all ranks for both fiscal and academic year appointments.

Salary improvements reported the past year ranged from a 1.9 percent salary decrease at one school to 8.87 percent increase at another. Thirty-one schools reported increases in the three to six percent range; two were above and the rest below.

It is somewhat difficult to ascertain changes in faculty positions for the field as a whole. Forty-three unfilled positions were reported this year compared to thirty last year and twenty-one the year before. Ten schools report losing one or two positions and another ten report gaining one or two for a net change of plus one.

## Students

The two questions we may most want to answer from the Students section are, "How many students are currently enrolled?" and "Is that number more or less than last year and the year before?" The question seems straightforward but the answer is complicated by the fact that each year a different group of schools have responded. This year all 56 schools with accredited Master's programs reported so that the Fall 1996 data reported below should be reasonably accurate. Last year, for Fall 1995 data, Wallace reported totals for 51 schools with accredited Master's programs; 50 ALA schools reported in Fall 1994, and 54 in Fall 1993. In each of these years the actual number of schools with accredited programs was greater. In the fall of 1992, 58 schools reported, the last year prior to this one in which all schools with accredited programs reported.

The table below provides comparative data for five years on several enrollment dimensions showing the different n's on which these numbers are based:

**Table VI-2**  
**ALA Schools - Enrollment Comparisons**  
**1992-96**

<b>Enrollment Category</b>	<b>Fall 1992 <i>n=58</i></b>	<b>Fall 1993 <i>n=54</i></b>	<b>Fall 1994 <i>n=50</i></b>	<b>Fall 1995 <i>n=51</i></b>	<b>Fall 1996 <i>n=56</i></b>
Total Enrollment	17,918	17,590	17,541	18,219	19,206
<i>FTE Enrollment</i>	<i>10,550</i>	<i>10,925</i>	<i>10,295</i>	<i>10,987</i>	<i>12,015</i>
ALA-Accredited Master's	12,379	12,069	11,214	11,746	12,649
<i>FTE</i>	<i>8,049</i>	<i>7,923</i>	<i>7,385</i>	<i>7,165</i>	<i>8,274</i>
Other Master's	786	817	749	992	1,175
<i>FTE</i>	<i>448</i>	<i>469</i>	<i>426</i>	<i>581</i>	<i>681</i>
Doctoral Students	617	590	587	608	628
<i>FTE</i>	<i>407</i>	<i>429</i>	<i>408</i>	<i>393</i>	<i>424</i>
Bachelor's Students	135	489	603	626	686
<i>FTE</i>	<i>103</i>	<i>397</i>	<i>484</i>	<i>527</i>	<i>600</i>
Other Grad. Students	1,370	1,314	1,571	1,299	1,416
<i>FTE</i>	<i>510</i>	<i>485</i>	<i>601</i>	<i>538</i>	<i>592</i>
Other Undergraduate Students	2,571	2,313	2,656	2,748	2,470
<i>FTE</i>	<i>1,035</i>	<i>1,085</i>	<i>914</i>	<i>1,674</i>	<i>1,337</i>

It seems clear from this table that the total number of students is increasing. The growth in the "other Master's" category warrants an examination, perhaps in next year's report. In the Fall of 1996 there were 25 schools with doctoral programs as compared to 24 in the Fall of 1992, although little change in numbers. Undergraduate bachelor's programs are growing apace as well -- from four schools in the Fall of 1992 to double that number in 1996.

The size of Master's programs varies widely from a low of 71 students at Dalhousie to a high of 638 at San Jose. Seventeen schools offer "other Master's" degrees, although as Saye notes in the Student chapter, 70% of the enrollment is at four schools. Post-Master's programs continue very small. Nearly half (25) of the 56 schools offer a doctoral program. Again, Saye reports skew in the data in favor of three schools who enroll between 54-84 students. More than half the schools enroll fewer than 20 in their doctoral programs.

Gender and ethnicity for students in accredited Master's programs continues to be of interest. Female graduates account for nearly three-quarters of all degrees awarded, although the number of graduates in "other Master's," post-master's and bachelor's programs are more nearly equally distributed by gender.

A three year comparison showing total numbers of students in the five categories defined by the U.S. Dept. of Labor and currently used by ALISE to report ethnicity appears below, with the caveat noted above that there are differences in the number of schools reporting this data. International students and those for whom ethnicity information was unavailable have been omitted from this table.

**Table VI-3  
Ethnicity of Master's Students in ALA Schools  
1994-96**

<b>Semester &amp; Year</b>	<b>American Indian</b>	<b>Asian &amp; Pacific Is.</b>	<b>Black</b>	<b>Hispanic</b>	<b>White</b>
Fall 1994	35	299	413	203	8,414
Fall 1995	37	306	447	338	9,063
Fall 1996	112	339	519	336	9,888

Although the total numbers have increased, the percent of the total pool has not changed significantly. Black students, for example, comprised 4.4% of this group in both 1994 and 1995 and 4.6% in 1996. Hispanic students comprised 2.2% in 1994, 3.3% in 1995, and 3% in 1996. By comparison, the Census Bureau reports that Blacks made up 12.1% of the U.S. population in 1995 and Hispanics 9%.

Age is another interesting variable. A comparison for males and females for the last two years of reported data for the accredited Master's programs show a slightly younger group in 1996.

**Table VI-4  
Age and Gender of Master's Students in ALA Schools  
1995-96**

<b>Fall 1995</b>				<b>Fall 1996</b>			
<b>Male</b>		<b>Female</b>		<b>Male</b>		<b>Female</b>	
<b>Under 40</b>	<b>Over 40</b>	<b>Under 40</b>	<b>Over 40</b>	<b>Under 40</b>	<b>Over 40</b>	<b>Under 40</b>	<b>Over 40</b>
1,699	587	5,120	2,854	1,821	698	7,528	3,240
74%	26%	64%	36%	82%	18%	70%	30%

There appears to be a modest increase in the number of in-state/in-province as opposed to out-of-state/out-of province students, as the three year table for accredited Master's enrollment below shows.

**Table VI-5  
Residence Status of Master's Students in ALA Schools  
1994-96**

	<b>Fall 1994</b>		<b>Fall 1995</b>		<b>Fall 1996</b>	
In-State/Province	7,324	75%	8,255	77%	8,815	79%
Out-of-State/Province	2,449	25%	2,418	23%	2,335	21%

## Curriculum

Much of the data reported in the Curriculum chapter on length of program, degree requirements, time to complete the degree, residency policies, required courses, exemptions and transfer credit, fieldwork, graduation and admission requirements, cross-listed courses and joint degree programs, and curriculum committee composition changes little from year to year and is a candidate for periodic reporting in future years. June Lester provided an excellent summary of the data in these categories for the 1992 *Report*, a year when all schools with accredited programs reported. This year, too, all schools with accredited programs provided data. Comparisons with the 1992 data on a number of the more static dimensions will be provided below to ascertain what changes have taken place in this five year interval.

**Table VI-6**  
**Degree Requirement in Semester Hours**  
**for Four Degree Programs in ALA Schools**  
**1992 and 1997**

Year	Undergraduate Major	Accredited Master's Degree	Post-Master's Degree/Certificate	Doctoral Degree
1992	18-48 <i>n</i> =9	28-60 <i>n</i> =58	12-60 <i>n</i> =34	30-90 <i>n</i> =25
1997	18-48 <i>n</i> =8	36-56 <i>n</i> =55	12-40 <i>n</i> =33	12-90 <i>n</i> =24

As Lester notes, the number of hours for degree requirements vary widely from school to school but appear stable for the five year period; minor differences can be accounted for by the particular groups of schools reporting. For the accredited Master's degree, most schools (35 in 1997; 33 in 1992) require 36 hours. Many schools offer a variety of post-Master's or certificate programs, one of which is often a school library/media or learning resources certificate. Other common certificate areas are archives, records management, public librarianship, and preservation. Some areas of interest include Drexel's new programs in competitive intelligence and software engineering, Indiana's chemical information specialist certificate and certificate in African studies librarianship; Texas has certificate programs in conservation and Latin American studies among others, and Washington offers a data resources management certificate.

Lester reported that 29 schools offered 73 joint degree programs in 1992. In 1997, 26 schools offered 71 joint degree programs. Typically, programs are in law, business, education, history and music. Hawaii offers joint degrees in Asian and Pacific Islander studies; St. John's has a joint degree with the College of Pharmacy; Wisconsin-Madison offers many joint degrees including geography, urban affairs, and foreign language and literature. No statistics are gathered reporting how many students are enrolled in these programs or how many such degrees are granted.

Time to complete the accredited Master's degree continues to vary among schools but not over time as the table below shows.

Summary

**Table VI-7**  
**Minimum Time to Complete Master's Degree in Months**  
**for ALA Schools**  
**1992 and 1997**

<b>Year</b>	<b>&gt; 12 months</b>	<b>12 months</b>	<b>13-18 months</b>	<b>&lt; 18 months</b>
1992 ( <i>n=59</i> )	37	6	14	2
1997 ( <i>n=56</i> )	35	7	13	1

The number of required course work hours for the accredited Master's ranged from 6-48 (or 6-36 without Columbia) in 1992 and from 9-36 in 1997. The table below shows the number of schools requiring different numbers of semester hours for the selected two years (quarter hours were converted to semester hours for this table).

**Table VI-8**  
**Number of ALA Schools Requiring**  
**Different Amounts of Required Courses in Semester Hours**  
**1992 and 1997**

<b>Year</b>	<b>&gt; 12</b>	<b>12-14</b>	<b>15-17</b>	<b>18</b>	<b>&lt; 18</b>
1992 ( <i>n=59</i> )	6	11	13	11	18
1997 ( <i>n=56</i> )	5	9	9	15	18

There appears to be a mild tendency to shift to a slightly higher number of required courses.

Few differences in entrance requirements emerged between 1992 and 1997. Three schools required library experience in 1992 compared to two in 1997; seven schools required a foreign language in 1992 but only three in 1997. Most schools continue to use the GPA as an entrance requirement (54 in 1992 and 56 in 1997).

Distance education is one area where considerable change might be expected and can be seen in the table below.

**Table VI-9**  
**Numbers of Off-Campus Courses**  
**Offered by ALA Schools**  
**1992 and 1997**

<b>Year</b>	<b>Schools Offering One or More</b>	<b>Total Number of Courses Offered</b>	<b>Range in Number of Courses Offered</b>	<b>No. of Schools Offering Required Courses</b>	<b>No. of Required Courses Offered</b>
1992	35 (59%)	485	1-50	30	1-30
1997	40 (71%)	909	1-155	33	1-36

San Jose offered the most courses off campus (155); other schools with large number of off-campus programs included Florida State (108), Emporia (62), Indiana (60), South Carolina (44), and Rosary (42).

**Table VI-10**  
**Faculty Status of Teachers of Off-Campus Courses**  
**1992 and 1997**

Year	Required Courses		Elective Courses	
	Regular Faculty	Adjunct Faculty	Regular Faculty	Adjunct Faculty
1992	65%	35%	91%	9%
1997	61%	39%	45%	55%

Although regular faculty continue to teach the majority of off-campus required courses, the proportion of adjuncts teaching electives has risen substantially with the increase in off-campus offerings.

Many schools reported plans to change their distance education programs in 1997, but only one indicated an intent to reduce offerings. Most have plans to increase numbers of off-campus courses or to introduce new offerings. Florida State plans a computer master's program at four sites via interactive video conferencing; Illinois offers its MS program electronically; Syracuse has a plan to offer courses in Singapore beginning in May 1997. In all, 23 schools report use of telecommunications to deliver courses in the 1997 Report compared to 10 schools in 1992. Course delivery over distance appears an expanding option that is attractive to LIS schools.

The size of the curriculum measured by number of courses listed ranged from 32 at Clark Atlanta for its one Master's program to 131 at Pittsburgh where a range of degree programs -- undergraduate to doctoral -- is offered.

A comparison of percent of on-campus courses taught by regular vs. adjunct faculty appears below and can be compared to the one above for faculty status of off-campus teachers.

**Table VI-11**  
**Faculty Status of Teachers of On-Campus Courses**  
**1992 and 1997**

Year	Total Number of Courses	Required Courses		Elective Courses	
		Regular Faculty	Adjunct Faculty	Regular Faculty	Adjunct Faculty
1992	3,142	88%	12%	73%	27%
1997	3,587	80%	20%	68%	32%

Other faculty (presumably doctoral students or staff) accounted for about 2% of total course offerings in 1992 but closer to 4% in 1997. The increase in total course offerings is another indicator of increasing enrollments.

## Summary

Many curricula changes were reported. As was true in 1992, about twice as many new courses were added as old ones dropped; more new programs were added (10 in 1997 compared to three in 1992) and a few more experimental courses were introduced (32 compared to 22). Many schools continue to review and revise all or part of their curricula. Most new or experimental courses (nearly 50) related to technology in 1997, often specifically mentioning the Internet in the name of the course. Management also seems to be a growing area for the development of new courses.

### Income and Expenditures

In Table IV-2 of the Income and Expenditures chapter, Roper and Olsgaard provide a ten-year summary of funding levels showing total income and average income based on the schools reporting. This year's increase is 4%. The percentage of total income coming from the parent institution continues to drop (72% for the 1995-96 year), as it has steadily for the past ten years, while the percentage derived from federal funds and other continues to increase. Federal funds and "other income" each accounted for close to 14% of the total this year. The average amount of federal funding, another key figure for the schools, continues to increase as it has for all but two of the preceding ten years. About 70% of the schools report receiving federal funding, a proportion that has held steady for the past four years.

Since the inception of the *Report*, a comparison of income for schools with and without doctoral programs shows that those schools with doctoral programs receive more than two times as much income as those without. In 1997, doctoral granting schools received two and a half times as much Federal funds and nearly four times as much "other" income (income from endowments and gifts, continuing education activity, state contracts, and the like).

The 11 Midwestern schools lead the field in average annual income for the fourth year in a row. The Northeast's 16 schools come next, followed by the Southeast's 13 schools, Canada's seven, the Southwest's five; the four schools from the West received on the average less than half the income of the Midwestern school. These figures should probably be treated with caution as very different patterns exist from school to school on the way income and expenditures are treated.

A comparison of the percent of the total budget expended in six major categories over the past six years shows some interesting proportional shifts.

**Table VI-12**  
**Percent of Expenditures in Six Major Categories**  
**for ALA Schools**  
**1992-97**

<b>Year of Report</b>	<b>Salaries &amp; Wages</b>	<b>Teaching &amp; Admin.</b>	<b>Library</b>	<b>Research</b>	<b>Student Aid</b>	<b>Continuing Education</b>
1992	76.8	8.8	1.0	4.0	5.7	1.6
1993	66.4	7.8	3.5	9.2	5.9	2.2
1994	62.8	8.0	3.3	10.4	8.7	2.0
1995	63.6	8.1	2.6	11.9	7.7	2.1
1996	60.9	9.8	2.6	14.2	6.4	1.6
1997	56.5	9.5	2.5	19.7	5.9	1.6

The amount spent on salaries as a proportion of the whole has dropped twenty percentage points. Schools are spending a slightly higher percentage on teaching and administration and a much higher percentage on research which now takes nearly a fifth of the total budget. The table below shows a significant increase in proportional salary expenditures in the specialist category.

**Table VI-13**  
**Percent of Salary and Wages by Personnel Category**  
**for ALA Schools**  
**1992-97**

<b>Year</b>	<b>Faculty</b>	<b>Specialist</b>	<b>Clerical</b>	<b>Student</b>
1992	76.3	8.3	8.6	6.9
1993	76.2	8.2	8.6	6.9
1994	75.1	9.3	8.6	7.1
1995	74.9	10.7	7.6	6.9
1996	75.6	9.5	7.9	7.0
1997	71.3	13.8	7.1	7.8

The proportional increase in spending for specialists and for research probably reflects two factors: the greater proportion of Federal funds being received that are earmarked for research and the increase in technology needed by schools, although it is difficult to find support for the latter argument, given that reported computing costs have accounted for only about 1% of the budget fairly consistently over the past six years. The variations from school to school and from year to year in this category are pronounced (for example, 1997 computing costs for all schools range from \$272 at one school to \$588,871 at another). Lester suggested in 1992 that the variations were so extreme as to make comparisons meaningless. Travel costs fluctuate widely in much the same way. As they do not yield useful information, both these tables might be omitted in future reports.

Institutional benefits, defined in the *Report* as in-kind contributions from the parent institution, also vary widely from year to year and from school to school. Forty schools report benefits of this kind. Sixteen of these schools identify computing support; fifteen identify library support either for materials or staff.

### **Continuing Education**

Forty-seven schools with accredited programs engaged in some form of non-degree continuing education activity last year, a relatively consistent number over the years as shown in the table below. The number of events has increased but total attendance after a steady increase for several years dropped a bit.

**Table VI-14**  
**Continuing Education Activity**  
**in ALA Schools**  
**1992, 1994, 1996, 1997**

Year	Number of Schools	Number of Events	Total Attendance
1992	45	494	22,088
1994	44	617	25,162
1996	43	716	30,341
1997	47	737	28,240

Schools that engaged in continuing education at a high level last year include South Carolina (49 events), Wisconsin-Madison (94) and Wisconsin-Milwaukee (104). Eighteen schools offered five or fewer events and nine reported no noncredit educational events.

Continuing education activity is reported by type of event -- institute or conference, workshop, seminar, lecture, short course, individualized instruction, and other (teleconference, study tour, storytelling festival, and the like). Weingand's eight year comparison of the number of these events (Table V-3) shows little shift in the number reported for each category with one or two exceptions. There appears to be an increase in workshop events and a decrease in short courses (possibly a difference in labelling); in the last four years there is an increase in the "other" category of events.

Continuing education events are primarily supported by fees. Weingand notes that outside instructors are usually paid by a flat or negotiated fee whereas many of the schools' own faculty participate in these events without additional compensation. Schools report most frequently using their own faculty and library/information practitioners as instructors. They use consultants, vendors and non-LIS faculty less often.

### Conclusion

This analytical summary has followed the pattern laid by writers of this section in past years concentrating for the most part on the internal evidence of the *Report* and drawing comparisons to data reported in past years. The comparisons Estabrook called for in the 1993 *Report* are not evident here except in two areas -- faculty salary and minority representation -- and then only national data are provided. Similar professional fields do not appear to have developed the same kind of statistical tool or, if they have, have not made it as publicly available. The 17 years of data in the *ALISE Statistical Report* have been freely contributed by the schools, collected and analyzed by volunteers with the support of their institutions, and then made available by ALISE to member schools as part of their membership benefits. This record of the size and shape of LIS education constitutes a remarkable accomplishment