Computer access is quickly becoming a staple service of public libraries in the United States. Between 2003 and 2007, the number of public-use Internet computers available in public libraries increased 33 percent. This may cause some to question if other, more traditional library services (such as circulation and reference), are falling by the wayside as public libraries focus on providing computer access.

This is not the case – according to national data from 2007, traditional services are not declining. Instead, as the number of public access computers per 5,000 of legal service area population rises, so do library visits, circulation, reference, and program attendance (see chart). This does not necessarily mean that traditional library services increase because access to public computers increases or vice versa, but it does indicate that libraries that have more public-use computers tend to have a higher frequency of traditional services as well.

![Per Capita Service Outputs of U.S. Public Libraries by Number of Public Library Computers per 5,000 Served, 2007](chart)

The data indicates that traditional services are not disappearing as libraries increase the availability of public access computers. However, it is not clear if traditional services drive the increase in available computers or if more computers attract patrons and in turn, traditional services thrive. Regardless, libraries are obviously not forced to choose between the two.

Note: U.S. libraries were divided evenly into four groups by the number of computers available per 5,000 served.
Correlations

The correlations between the number of computers and each service output discussed reveal that the relationship between them is significant. The two strongest relationships with the number of computers are with program attendance, with a correlation of 0.106, and library visits, with a correlation of 0.097 (see table). It should be mentioned that although all correlations were significant, the strength of the correlations were rather weak in 2007 and considerably lower than an analysis using 2003 data.¹ The decline in these correlations could be evidence that computer access in U.S. public libraries has become independent of these other services.

<table>
<thead>
<tr>
<th>Number of Computers</th>
<th>2003</th>
<th>2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library Visits</td>
<td>0.606</td>
<td>0.097</td>
</tr>
<tr>
<td>Circulation</td>
<td>0.299</td>
<td>0.064</td>
</tr>
<tr>
<td>Reference</td>
<td>0.292</td>
<td>0.048</td>
</tr>
<tr>
<td>Program Attendance</td>
<td>n/a²</td>
<td>0.106</td>
</tr>
</tbody>
</table>

Conclusion

Clearly, increased computer access does not come at the cost of other library services. Providing computer access is no longer the “new kid on the block” and is, in fact, expanding to include Wi-Fi connectivity in most public libraries (76.4% nationally). Computer access should not be viewed as competing with other traditional library services any more than circulation competes with reference or programming. Instead, it seems, computer access has become one of the traditional services.

¹ For more information on the previous analysis, see “Access to Internet Goes Hand in Hand with Other Public Library Services & May Attract Library Visitors”: http://www.lrs.org/documents/fastfacts/240_Output_By_Computers_REV.pdf.
² The relationship between program attendance and number of computers was not examined in the 2003 analysis.
More Job Seekers, Fewer Jobs: Findings from Library Jobline, Year Three

For the last 3 years, Library Research Service, a unit of the Colorado State Library, has provided a venue for libraries and library staff to meet in the job search. LibraryJobline.org is a database-supported website where job seekers can create personal accounts and libraries from throughout the state and nation can post job listings. This free service, available online 24 hours a day, 7 days a week, offers job seekers interactive tools to specify what they are looking for in a position and allows them to receive notifications when a related description is posted. Comparisons among the postings over the 3-year period reflect aspects of the current economic climate as well as reveal trends in the library field.

Number of Job Postings

As librarians are well aware, their profession has not been immune to the negative effects of the economic recession. This is evident simply from the decline in the number of job postings on Library Jobline. Only 233 jobs were posted during 2009—56 percent of the total posted in 2008 (418) and less than half (45%) of the 2007 total (523).

The sharp decline started in September 2008 and continued through most of the following year. By the last 3 months of 2009, however, the number of job posts matched those of the same period in 2008. Though still considerably fewer than the number of jobs posted in 2007, this may indicate the first signs of recovery (see Chart 1).

Quick Look at LibraryJobline.org

Since 2007:
- 1,500 positions posted
- More than 1,500 people have signed up for MyJobline accounts
- 2 out of 3 registered users receive email notifications of new job posts
- More than 1 out of 3 registered users subscribe to Jobline’s RSS feed

Chart 1
Library Jobline:
Number of Job Posts by Month
January 2007 - December 2009
While the number of job postings decreased, the number of job post views increased by 23 percent (from 338,347 in 2008 to 416,253 in 2009). Not only are fewer jobs available, but those looking for work face more competition.

In an increasingly competitive job market, job seekers and employers search for a variety of ways to distinguish the top candidates from the larger pool of applicants. Advanced education traditionally has been a way to do that. Surprisingly, the percentage of job postings requiring an MLS degree has decreased slightly in the last 3 years (from 35% in 2007 to 31% in 2009). However, a notable increase in the proportion of postings preferring an MLS degree, from 12 percent in 2007 to 18 percent in 2009, suggests that the further education is still an advantage for job seekers (see Chart 2).

Reasons for the changes in degree preferences and requirements are unclear. Even so, it is obvious that the increase in the percentage of job posts preferring the degree is connected to the decrease in percentage of job posts that require and do not require the degree. The changes could simply be due to the level and types of jobs posted, which can vary from year to year (i.e. more shelving versus administrative positions, or an increase in positions that combine professional and non-professional duties).

Another noticeable shift has occurred in the ratio of full-time (40 hours per week) to part-time (less than 40 hours per week) job posts. Over the last three years, the percentage of full-time job posts has steadily decreased, dropping from 72 percent in 2007 to 62 percent in 2009. The same trend seems to be occurring nationwide, according to Library Journal’s latest report on the employment rates and salaries of recent MLIS graduates. In 2007, 

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nearly 9 out of 10 (89%) MLIS graduates reported finding full-time jobs, but only 7 of 10 had similar luck in 2008.

**Posts by Library Type**

Overall, the proportion of job postings by library type stayed about the same as in previous years, with the majority of posts (58%) being for jobs in public libraries. Fewer than 1 out of 5 postings were for academic (19%) and special (17%) libraries, and just 1 of 10 were for schools (9%). Perhaps due in part to other avenues for advertising available positions, especially in school libraries, these proportions may not be an accurate reflection of the actual number of job openings (see Chart 3).

Although school library postings account for a small percentage of the positions posted on Jobline, they tend to garner considerable interest. The “Hot Job” of 2009 was for a teacher librarian with Denver Public Schools. This post was viewed more than 5,000 times. The next most popular post, for a management position with the Rangeview Library District, received 28 percent fewer views, with 3,663.

![Chart 3](chart.png)
Salaries

For those lucky enough to find a job, salary is an obvious concern. Unfortunately, it appears that salary was not immune to the cutbacks visible in other areas. Although the average starting hourly wage of job postings\(^2\) saw a significant increase from 2007 to 2008 (4.3%), it declined by 2.4 percent during 2009.

Compared to the Bureau of Labor Statistics’ librarian and library technician salary estimates\(^3\) for the nation and for Colorado, the salaries listed for Library Jobline posts are on the low end. This could be due to an uneven distribution of postings according to their level and salaries (i.e. more page positions than administration), skewing the average lower. Another factor may be that the Bureau of Labor Statistics uses actual current wages, rather than starting salaries, in its calculations. Nevertheless, Library Jobline postings showed a higher percentage increase in average salary from 2007-2008 (4.3%) than did the nation (3.6%) or the state of Colorado as a whole (3.2%).

Salary and MLS Degree

While average salaries overall declined in 2009, the job postings requiring an MLS – though slightly fewer than in previous years – were offering higher average starting wages. Positions with fewer educational requirements dropped below the average salary from two years before.

Most drastic was the drop in salary for job postings preferring an MLS. The decrease of 13.5 percent brought the average down by $2.70 from 2008 to 2009, settling at a significantly lower amount, even, than in 2007. It seems that although more job postings preferred candidates with an MLS degree, they weren’t necessarily offering monetary compensation for it (see Chart 4).

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\(^2\) The average includes all levels of library positions, from shelving to administration. The number of job posts at each level would affect the overall average salary for each library type, potentially pushing it toward either the high or low end. Calculations used the starting salary listed for each job post.

\(^3\) The nationwide and Colorado salaries were calculated using the Bureau of Labor Statistics State and National Occupation Employment and Wage Estimates. The dollar amounts given are an average of the wages listed for librarians and library technicians. Salary estimates for 2009 will not be available until May. For more information, visit http://www.bls.gov/oes/home.htm
Conclusion

Without a doubt, the most significant change in Library Jobline’s third year was the drastically lower number of jobs posted – little more than half the number posted in 2008. At the same time, the number of job post views has increased considerably (23%). More people are looking for jobs, but there are fewer job openings, and salaries for those jobs available have decreased. The final months of 2009 saw the number of job posts return to late 2008 levels, showing the slightest signs of the beginnings of a recovery. Even so, Library Jobline stats show the library field still has a long way to go in climbing out of the economic slump.

With the advent of e-Readers, such as the Kindle, Sony Reader Touch, and the Barnes & Noble Nook, many people are discussing what this new reading method means for print formats. Is it the beginning of the end for paper books? Will paper books and electronic formats exist together? Or are electronic books and reading devices just a fad that will eventually fade?

The Library Research Service’s (LRS) recent 60-Second Survey: The Future of the Book asked respondents what they thought of electronic and print formats and how those formats might change in the future. The survey was advertised on several librarian listservs, the Library Research Service website and blog, and the American Library Association weekly e-newsletter. More than 1,300 respondents participated and 947 of them (71%) also left comments, further explaining their thoughts on the future of the book. The majority of the comments were thoughtful and passionate, revealing a high level of interest in this topic. The comments were analyzed and six themes emerged addressing various influences on format: multiple formats will coexist, technological advantages, emotional and aesthetic draw to paper books, content is king, and generational change.

In this Fast Facts, the comment analysis in general is described, as well as what respondents said about technology and cost, and how those comments relate to other survey question responses. For more about the survey results and an analysis of the other comment categories, see the second in this series of Fast Facts: The Future of the Book, Part 2: Beyond the Bathtub, Personal Preference Among Many Factors Influencing Format Choice.

Comment Analysis
The comments were tagged for each theme they fell into (many comments discussed more than one theme). The categories of technology and cost were further tagged as pro-paper book, pro-eBook, or neutral, if they did not clearly indicate which format was believed to be superior. Chart 1 shows the number of times a comment was tagged in each category. The two most frequently discussed categories were “multiple formats will coexist” (431 comments) and “technological advantages” (340 comments).

As mentioned before, comments that discussed technology and cost were tagged based on the format advocated. These comments are discussed in this Fast Facts due to their “eBooks versus paper books” approach to the future of the book discussion.
“Books are a cheap, simple, durable, transferable, and persistent technology. Most e-books I have seen so far meet none of these criteria.”

“Books will always have a place, but I find with the enhancements made with electronic format... has made me a convert... I foresee vast educational uses for this format - easy access to references and background information, plus it would be helpful for an array of special education reading problems.”

**Technological Advantages**

More than one in three comments (36%) discussed the technological advantages of eBooks or paper books. The majority of these comments (62%) discussed paper book advantages, while only 26 percent discussed eBook advantages, and the final 10 percent were neutral (generally mentioning advantages of both formats). Comments that discussed the technological advantages of paper books frequently pointed out that paper books are a durable format, they can be used without electricity or batteries, and that paper books are easier on the eyes. Comments that discussed eBooks mentioned the convenience, portability, and various enhancements of eBooks.

Respondents tagged as commenting on technological advantages were compared with responses to two survey questions which asked respondents about their predictions for paper books and libraries (“Do you think paper books will eventually disappear?” and “What do you predict libraries will circulate in 10 years?”). The results of these questions from all respondents revealed that almost 2 in 3 respondents (63%) did not believe paper books will ever disappear. Much smaller percentages believed books will disappear in 100 years or more (11%), within 51-100 years (11%), or within the next 50 years (15%). Regarding what respondents predict libraries will circulate 10 years from now, an almost equal percentage of respondents predicted more electronic materials than physical (40%) and...
an equal number of electronic and physical materials (44%). The remaining 16 percent predicted physical items will continue to predominate in libraries.

However, among respondents tagged as commenting on technological advantages the response to these questions was slightly different. Three out of four respondents (75%) that discussed the advantages of paper books think the paper book will never disappear (see Chart 2). Just over half of the respondents that discussed eBook advantages (55%) agree that paper books will never disappear. However, 1 in 4 of those that discussed eBook advantages (25%) predict the book will disappear within the next 50 years.

Almost 1 in 2 of those that commented on the paper books’ advantages (48%), did however, predict that libraries would circulate an equal amount of paper and electronic materials 10 years from now (see Chart 3). Although these respondents believe the paper book is currently superior, they do anticipate libraries will greatly increase their electronic collections. On the other hand, the majority of those that commented on eBooks’ advantages (53%) predict electronic materials to surpass physical materials in the next 10 years.

“It is sad, but I think it is going to change greatly in the next 20 years. I think eventually the printed book will disappear. Cost, convenience and new generations will all make the move to electronic happen.”
Cost
In addition to technology, several comments (116) discussed the cost of paper and electronic formats. As with technology, there were comments on both sides of the argument. Sixty-four percent of these comments indicated that paper books were the less expensive format, while 25 percent said this was true of eBooks, and 11 percent mentioned cost, but did not indicate which format was most cost effective.

Again, the responses to the survey questions “Do you think paper books will eventually disappear?” and “What do you predict libraries will circulate in 10 years?” were compared with the respondents that were tagged as commenting on cost. The majority of respondents (64%) that commented on the lower cost of paper books also believed that paper books will never disappear (see Chart 4). 48 percent of those that commented on the lower cost of eBooks agree that paper books will never disappear, but the second largest group in this category (24%) believe paper books will disappear within the next 50 years. Their thoughts on the cost effectiveness of the eBook may be one reason

"The cost of the machines [eReaders] is prohibitive...Libraries can become too heavily invested in electronics and the cost of having to replace all the outdated technology that keeps being replaced by newer technology. There is not enough money for libraries to supply everything to everybody."
why. Those that argued that the paper book is less expensive are very similar to the response received from all respondents; though a higher percentage from the overall response believed paper books will disappear within the next 50 years (15%).

Chart 4
Future of the Book:
Respondents Comments on Cost Compared to If Paper Books Will Ever Disappear

Among the respondents that commented on the lower cost of paper books, more than 1 in 2 (53%) still predict that libraries will circulate an equal number of electronic and physical materials in ten years and 24 percent predict libraries will circulate more electronic materials than physical materials (see Chart 5). Similar to those that discussed the technological advantages of paper books, these respondents still believe the disparity between physical and electronic materials in libraries will decrease regardless of which format they believed more cost effective. Only the remaining 24 percent anticipate more physical than electronic materials. Unsurprisingly, the majority of respondents that argued the lower cost of eBooks (59%) expect more electronic materials and only 7 percent of this group believe physical materials will still outnumber electronic materials ten years from now.

“The book is durable and economically less costly than eBooks or audio books. Thus, I feel that their continued survival is pretty much guaranteed.”
Conclusion

The future of the book is certainly an issue respondents felt strongly about. The comments revealed the important issues of technological advantages and cost of both formats. Although many respondents believe paper books to be superior in technology and cost, the majority still predict a shift in the formats libraries will circulate. With 44 percent of all survey respondents expecting an equal number of physical and electronic materials in libraries, it is no surprise that the most frequently cited theme in the comments was that multiple formats will exist in the future. In the second in this series of Fast Facts, this comment category will be analyzed, as well as the emotional/aesthetic draw to paper books, content is king, and generational change. Interesting differences in how respondents answered survey questions based on the type of library they work in and if they own an eReader are also examined.
With the emergence of more and more electronic reading devices, many people are discussing what this new reading method means for print formats. The Library Research Service’s (LRS) recent 60-Second Survey: The Future of the Book asked respondents what they thought of electronic and print formats and how those formats might change their reading habits in the future. Many respondents (71%) also left comments, which were analyzed according to six themes that emerged addressing various influences on format (see the first in this Fast Facts series, The Future of the Book, Part 1: Cost and Technological Advantages of Paper and Electronic Formats, for more information on the comment analysis).

This Fast Facts takes a closer look at what survey respondents said about the existence of multiple formats, the role content plays in determining format, the emotional and aesthetic aspects of paper books, and the influence of time and generation. Also analyzed are their responses to some of the survey questions, with particular attention paid to how the type of library where respondents work and whether they own an e-reader affected their responses.

### Multiple Formats

When asked what they thought about the future of the paper book, almost two-thirds (63%) of survey respondents reported that books would never disappear, and about 1 out of 10 (11%) foresaw their eventual demise after more than 100 years. In the meantime, paper books are left to compete with the growing number of electronic books appearing on the market.

Almost half (46%) of survey comments suggested that multiple formats for reading would coexist successfully in some way, citing electronic books as an alternative to, rather than replacement of, paper. In fact, when asked what they thought libraries would circulate in 10 years, 2 out of 5 respondents (43%) answered an equal number of physical and electronic resources, the most popular response. Nevertheless, the trend toward incorporating more electronic materials is apparent. Forty percent of respondents predicted that libraries would circulate more electronic than physical resources or only electronic materials in 10 years, with less than half as many (16%) anticipating circulation of more physical resources (see Chart 1).

> “Like all communication formats, change is constant and new formats continue to evolve. Different formats work for different audiences and purposes. Paper will continue to work best for some types of reading and some audiences, although eventually some form of e-book will be the predominant format.”

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**Chart 1**

<table>
<thead>
<tr>
<th>Library Circulation in 10 Years Percentage of Types of Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Libraries Won’t Exist</td>
</tr>
<tr>
<td>Only Electronic</td>
</tr>
<tr>
<td>More Physical</td>
</tr>
<tr>
<td>More Electronic</td>
</tr>
<tr>
<td>Same Amount</td>
</tr>
</tbody>
</table>
Owing an E-Reader and Multiple Formats

As might be expected, owning an e-reader influenced what survey respondents thought about the future of library circulation. Although a plurality of respondents from each camp (41% e-reader owners, 44% non-owners) agreed that libraries would circulate about the same amount of physical and electronic materials, the more telling numbers are in the responses to “more electronic” or “more physical” materials. Respondents who owned e-readers (46%) were more likely than non-owners (38%) to anticipate higher circulation of electronic materials, while double the percentage of non-owners (17%) as owners (8%) predicted higher circulation of physical materials.

Library Type and Multiple Formats

The type of library where respondents work also affected their views on future library circulation. Public and school library staff gave similar responses to the types of materials libraries would circulate in 10 years, with half anticipating an equal number of electronic and physical materials. In contrast, only a third of academic librarians expected to circulate an even number of each format.

Instead, the majority of academic librarians (55%), more than any other type, predicted more electronic materials, while just under a third (30%) of public and school librarians said the same. Special librarians’ predictions were split more equally, with nearly half (46%) expecting to circulate the same amount and slightly fewer (44%) anticipating more electronic materials (see Chart 2).

![Chart 2](chart2.png)
Content is King

A number of respondents emphasized that the information itself is more important than how it is packaged; nevertheless, the nature of that information can influence its presentation. Nearly 1 out of 5 (18%) comments indicated that content may be the most influential factor in dictating the preferred format for various genres and types of materials.

Two survey questions addressed the topic of content driving format choice. Respondents noted which format they currently used to read fiction, non-fiction, and textbooks and then indicated their anticipated use in 10 years. Only one format showed little change: audio use of each type of material was expected to increase less than 1 percent.

In contrast, respondents indicated that their use of electronic formats to read fiction, non-fiction, or textbooks would escalate anywhere from 3 to 6 times the current percentages, while paper use would decrease accordingly. Paper was still the preferred format in the future for fiction and non-fiction, but a closer balance between it and electronic use supports the likelihood that multiple formats will coexist.

Within the predicted changes, the number of respondents who expected to read textbooks electronically jumped significantly, from 1 in 10 now to nearly 6 in 10 (59%) in a decade. Fiction and non-fiction saw substantial, though less dramatic, increases in anticipated use of electronic formats (from 5% to 22% and 11% to 37%, respectively) (see Chart 3).

“If a book contains something that interests a significant number of people it will be published and “read,” regardless of format, and regardless of whether “reading” actually means reading, viewing, listening, or participating, or all four.”
Owning an e-reader influenced whether respondents thought they would read fiction, non-fiction, and textbooks electronically in the future, though the discrepancy was least obvious in the latter category. In 10 years twice as many e-reader owners (65%) as non-owners (32%) anticipated reading nonfiction electronically, with nearly the exact opposite being true for paper format (see Chart 4).

Responses and comments indicated that survey respondents thought news or informational reading was most likely to lead the way in transitioning to electronic text, while pleasure reading would remain in print. One rationale suggested by respondents was that electronic textbooks could offer enhanced searching and reduced costs for students and revised editions would be simpler to produce. When it came to defending fiction in print format, respondents often cited more emotive reasons.

**Emotional and Aesthetic Appeal of Paper Books**

One out of 4 comments addressed the unique emotional or aesthetic appeal of paper books. Although not asked directly about it in the survey questions, these comments revealed a heartfelt, personal attachment to paper books for a variety of reasons.

"Who wants to read their kid a bedtime story using a Kindle? And what e-reader can simulate the experience of looking at a large hardcover art book with high-quality reproductions? I just don’t see how e-readers supplant the paper book in areas such as this."

Frequently noted was the comprehensive sensory experience of reading, which includes holding, feeling, and smelling a paper book, and hearing the turning of the pages. Equally common was a reference to the pleasure of “curling up with a good book.” For many
respondents, the comfort and familiarity of reading paper enhanced the enjoyment of the activity.

In addition to the emotional aspect, paper books also boast certain aesthetic qualities that e-readers have yet to mimic satisfactorily. For example, many respondents claimed that the superiority of print illustrations ensured that coffee table, art, and children's books would remain in print rather than finding success in an electronic format.

**Time and Generational Influences**

Just over 1 out of 10 (12%) survey comments indicated that the emotional attachment or aesthetic preference could be a generational phenomenon that would fade with time, affecting format prevalence. This almost inevitable “change over time” has occurred before, most obviously in format changes for music and movies, some of which resulted in near complete transitions and others that were shorter lived. While paper books offer more durability to survive the e-reader invasion, some respondents predicted that their use eventually would be restricted to museum displays and collectors' items.

A few respondents remarked that with constant developments and the unveiling of new devices, it was nearly impossible to predict how e-readers would look and function in a few years. Despite the uncertainty, younger generations are already accustomed to using electronic technology. Most comments predicted that the transition to electronic formats would coincide and accelerate with baby boomers' retirement and tech-savvy youngsters' emergence as a driving force in the market and the economy.

**Conclusion**

The debate over electronic versus print books continues to raise a variety of questions and opinions. Despite some conflicting views, however, a significant percentage of survey respondents agreed that in the future, multiple formats will coexist in some way and libraries will circulate an increasing number of electronic materials. The type of content may prove to be the most influential factor in determining format. Many foresee informational reading transitioning to electronic text and pleasure reading remaining in print, as numerous respondents feel an emotional tie to paper books. Generational differences also could impact format prevalence, but only time will truly tell how and why paper or electronic formats prevail.

**ABOUT THIS ISSUE**

Author: Jamie Helgren – DU-LRS Research Fellow
Library Research Service • 201 East Colfax Avenue, Suite 309 • Denver, CO 80203-1799
Phone 303.866.6900 • E-mail: LRS@LRS.org • Web site: www.LRS.org
Increased Library Staff Links to Higher CSAP Scores

Known links between higher school library staffing levels and better CSAP scores are confirmed by a recent examination of 2007-08 data on school libraries and 2008 data on students scoring proficient or advanced on CSAP reading. In addition, better-staffed school libraries are also associated with reduced percentages of students receiving unsatisfactory CSAP scores, thereby helping to close the achievement gap.

**Endorsed Librarian Staffing**

For purposes of this study, the term “librarian” refers to an individual endorsed by the state of Colorado as a School Librarian, a Teacher Librarian, or a Media Specialist. Total FTE includes support staff.

Elementary schools with at least one full-time endorsed librarian averaged better CSAP performance than those with less than one full-time endorsed librarian. More students earned proficient or advanced reading scores and fewer students earned unsatisfactory scores where there was a full-time endorsed librarian (see Chart 1). Elementary schools with librarians averaged 68 to 72 percent of students scoring proficient or advanced and 9 to 11 percent scoring unsatisfactory. Schools without librarians averaged 64 to 68 percent scoring proficient or advanced and 12 to 13 percent unsatisfactory (see Chart 1).

**Chart 1**

CSAP Reading Performance by Librarian Staffing

<table>
<thead>
<tr>
<th>Grade</th>
<th>Proficient or advanced 1+ FTE</th>
<th>Proficient or advanced &lt;1 FTE</th>
<th>Unsatisfactory 1+ FTE</th>
<th>Unsatisfactory &lt;1 FTE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd Grade</td>
<td>72%</td>
<td>68%</td>
<td>12%</td>
<td>10%</td>
</tr>
<tr>
<td>4th Grade</td>
<td>68%</td>
<td>64%</td>
<td>12%</td>
<td>9%</td>
</tr>
<tr>
<td>5th Grade</td>
<td>72%</td>
<td>68%</td>
<td>13%</td>
<td>11%</td>
</tr>
</tbody>
</table>

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

<table>
<thead>
<tr>
<th>Percent of Students Scoring Proficient or Advanced</th>
<th>Percent of Students Scoring Unsatisfactory</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd Grade</td>
<td>15%</td>
</tr>
<tr>
<td>4th Grade</td>
<td>15%</td>
</tr>
<tr>
<td>5th Grade</td>
<td>15%</td>
</tr>
</tbody>
</table>
Total School Library Staffing
In addition to full-time endorsed librarians, total library staff in full-time equivalents (FTE) makes a difference in CSAP reading scores.

For elementary schools with at least one full-time endorsed librarian or one and a half FTE library staff, the percentage of third, fourth, and fifth grade students scoring proficient or advanced in reading was consistently higher than for schools with lower staffing levels – a 4 to 5 percent absolute difference and a 6 to 8 percent proportional difference (see Table 1).

Table 1
Percent of Students Scoring Proficient or Advanced in Reading on the Colorado Student Assessment Program (CSAP) by Library Staffing Level
Grades 3-5, 2008

<table>
<thead>
<tr>
<th>Grade and Library Staffing Variable</th>
<th>Criterion</th>
<th>Percent of Students Scoring Proficient/Advanced on CSAP Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Criterion or above (N)</td>
</tr>
<tr>
<td>3rd Grade Librarians (FTE)</td>
<td>1</td>
<td>72% (230)</td>
</tr>
<tr>
<td>Total FTE</td>
<td>1.5</td>
<td>73% (122)</td>
</tr>
<tr>
<td>4th Grade Librarians (FTE)</td>
<td>1</td>
<td>68% (229)</td>
</tr>
<tr>
<td>Total FTE</td>
<td>1.5</td>
<td>69% (123)</td>
</tr>
<tr>
<td>5th Grade Librarians (FTE)</td>
<td>1</td>
<td>72% (232)</td>
</tr>
<tr>
<td>Total FTE</td>
<td>1.5</td>
<td>73% (120)</td>
</tr>
</tbody>
</table>

**p < .01

Schools with more librarian staffing also tended to have a lower percentage of students scoring unsatisfactory in reading – a 2 to 3 percent absolute difference and a 15 to 25 percent proportional difference (see Table 2). An even stronger pattern in scores was seen in schools having at least one and a half FTEs (ideally, at least one librarian and support staff) – a 2 to 3 percent absolute difference and a 17 to 27 percent proportional difference.

"When a school includes an endorsed librarian in its staffing, the librarian’s role is a strong part of the teaching and learning in that school. Students benefit from the collaborative teaching of information problem-solving, inquiry, and critical thinking skills that the librarian and classroom teachers provide. These skills ensure that students are effective users of ideas and information, helping to close the achievement gap and to prepare the students for life-long learning."

Nance Nassar, School Library Senior Consultant, Colorado State Library

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In the comparison-of-means tables, two differences are reported: the absolute difference (simply labeled “difference”) and the proportional difference (labeled “percent difference”). To understand the distinction, consider a case where the two percentages of students earning proficient or advanced CSAP scores are 20% and 30%. The absolute difference between the two is 10%; but, the proportional difference is 50% (30 minus 20 equals 10, and 10 is half of 20).
Table 2
Percent of Students Scoring Unsatisfactory in Reading on the Colorado Student Assessment Program (CSAP) by Library Staffing Level, Grades 3-5, 2008

<table>
<thead>
<tr>
<th>Grade and Library Staffing Variable</th>
<th>Criterion</th>
<th>Percent of Students Scoring Unsatisfactory on CSAP Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Criterion or above (N)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3rd Grade Librarians (FTE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total FTE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4th Grade Librarians (FTE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total FTE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5th Grade Librarians (FTE)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total FTE</td>
</tr>
</tbody>
</table>

Relative impact and relationship to the achievement gap
Elementary schools with better-staffed libraries have a significantly higher percentage of students scoring proficient or advanced in reading and a significantly lower percentage of students scoring unsatisfactory. Based on the proportional differences reported above, the evidence indicates that library staff can have a positive impact on all students. In addition, the fact that proportional differences associated with unsatisfactory scores are so dramatic suggests that a well-staffed library can be especially important for the neediest students. These results indicate that school library staffing can play an important role in narrowing the achievement gap.

Conclusion
These findings come from the third Colorado study of the impact of school libraries and librarians on academic achievement, and the second one to examine their impact on student performance on the Colorado Student Assessment Program (CSAP) tests.

The findings about library staffing levels in this latest study are consistent with those of the two previous studies. Students tend to perform better on achievement tests where school libraries have more full-time equivalents (FTEs) of staffing, especially at the librarian level.

Between 2000 and 2009, similar findings have been generated by studies in 17 other states (Alaska, California, Florida, Illinois, Indiana, Iowa, Massachusetts, Michigan, Minnesota, Missouri, New Mexico, New York, North Carolina, Oregon, Pennsylvania, Texas, and Wisconsin) as well as the Canadian province of Ontario. Many of these studies also present evidence that the relationships between library...
staffing and test performance cannot be explained away by other school or community conditions.

More recent studies in Indiana and Idaho suggest some of the day-to-day dynamics of school life that may account for these relationships. In Idaho (the latest of these studies), higher test scores tended to be earned by students whose principals felt that their schools did an excellent job of teaching information, communication, and technology (ICT) literacy. In turn, such self-assessments were more likely at schools where principals valued as essential (or at least desirable) several policies and practices associated with fully credentialed librarians:

- Flexibly scheduled access to the library,
- Collaboration between the school librarian and classroom teachers in the design and delivery of instruction,
- Provision of in-service professional development opportunities to teachers by the librarian,
- Appointment of the librarian to key school committees,
- Regular meetings between librarian and principal, and
- Addressing the instructional role of the librarian during teacher hiring interviews.

Credentialed librarians were two to three times more likely to report engaging in most of these activities at least weekly than others deputized to run the library.
Endorsed Librarian Positions in Colorado Public Schools Trending Downward

As Colorado begins implementing new content standards that emphasize the acquisition of 21st century skills and the ability to understand information in new ways, “digital natives,” a demographic group born and raised in the information age and presumed to be tech savvy, demonstrate a surprising lack of discernment when evaluating information resources, according to a recent study of first-year college students at the University of Illinois in Chicago. Unfortunately, this comes at a time when school librarians are finding their positions being eliminated, despite being uniquely qualified as information specialists to help students develop information literacy as part of meeting the post-secondary and workforce readiness expectations of students in the state.

Data from the Colorado Department of Education reveals that the number of endorsed librarian positions (in full-time equivalents) in Colorado public schools is trending downward, with substantial losses over the last two school years. In 2007-08, the majority of endorsed librarians (278) were employed in elementary schools, and the following year that number dropped to 241. Similar declines were experienced at middle and high school levels (see Chart 1).

![Chart 1: Number of Endorsed Librarians in Colorado Public Schools by Grade Level 2007-08 and 2009-10](chart1.png)

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Despite the fact that a greater number of librarians were employed at elementary rather than middle and high school levels in 2007-08, elementary schools were still the least likely to have an endorsed librarian on staff. This difference is a result of the greater number of elementary schools in Colorado, which proportionally have fewer librarians compared to the smaller number of middle and high schools in the state.

In 2007-08, only about a quarter (27%) of elementary schools had a librarian, compared to almost half (45%) of middle schools and more than a third (37%) of high schools. The percentage of elementary schools with a librarian fell from 27 percent in 2007-08 to 23 percent in 2009-10. Even more dramatic downward trends were experienced at middle and high school levels (see Chart 2).

Chart 2
Percent of Colorado Public Schools with Endorsed Librarian by Grade Level
2007-08 and 2009-10

Grade level

Elementary
Middle
High

Percent of schools with Endorsed Librarian

0%
10%
20%
30%
40%
50%

27% 23%
45% 37%
37% 32%
Between 2007-08 and 2009-10, Colorado elementary schools experienced a net loss of 37 endorsed librarian positions. Similar patterns for middle and high schools account for the net loss of another 30 positions at middle and high schools. The reduced number of librarian positions at elementary and middle schools constituted a loss of 13 percent. At high schools, the proportional loss of librarian positions was slightly less severe at 9 percent (see Chart 3). Of course, the data does not reflect any reduced funding for K-12 education for the 2010-11 school year, which will likely result in additional library staff reductions.

Over the past two school years (2007-08 through 2009-10), the net loss of 67 librarian positions out of 562 constitutes a loss of 12% of all endorsed librarian positions in Colorado public schools. If endorsed librarian positions continue to be lost at the rate of 67 a year, they will be extinct in Colorado public schools by 2025. Hypothetically speaking, that means that by the time children born today reach high school, they would not have the assistance of trained librarians to help them navigate the information environment – and just at a time when such skills are becoming more and more important to society and also as part of the very standards in which students are expected to be proficient.

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**Chart 3**
Loss of Endorsed Librarians in Colorado Public Schools by Grade Level
2007-08 and 2009-10

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>-37</td>
<td>-13%</td>
</tr>
<tr>
<td>Middle</td>
<td>-40</td>
<td>-16%</td>
</tr>
<tr>
<td>High</td>
<td>-35</td>
<td>-9%</td>
</tr>
</tbody>
</table>

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ABOUT THIS ISSUE
Author: Keith Curry Lance
Library Research Service • 201 East Colfax Avenue, Suite 309 • Denver, CO 80203-1799
Phone 303.866.6900 • E-mail: LRS@LRS.org • Web site: www.LRS.org
As part of the Public Library Annual Report administered by the Library Research Service, Colorado public libraries indicate whether they have received challenges to their materials or services. In 2009, 20 of the 115 public libraries in the state reported at least one challenge. Nineteen of the libraries completed a follow-up survey to provide more details about those challenges.

In total, Colorado public libraries reported 48 challenges in 2009, the lowest number in more than a decade. No title was challenged more than once, and just one of the Colorado challenges (“And Tango Makes Three” by Justin Richardson) appeared on the American Library Association’s list of top ten most frequently challenged books of 2009.

**Formats Challenged**

Although books and videos account for a lower percentage of total challenges than in previous years, they continue to be the most challenged formats, with books accounting for one out of two challenges (52%) and videos one out of four (27%). Challenges to periodicals and computer services increased from previous years, rising from 3 percent in 2008 to 8 percent in 2009 (see Chart 1).
Audience
The target audiences of challenged materials have varied over the last few years. In 2009, well over half (56%) of challenged materials were aimed at adults, while a quarter were directed at children. The previous year, challenges to children’s materials spiked to 44 percent, but challenges in 2009 (25%) were closer to the average from previous years. Challenges to adult materials in 2008 were also unusual compared to previous years with a notable dip (39%), although the 2009 and 2005-2007 percentages were nearly identical. In contrast, the percentage of challenges to young adult materials in 2009 was more consistent with the previous year, coming close to 1 in 5 (19%) (see Chart 2).

The drastic increase in challenges to children’s materials in 2008 likely is a result of multiple challenges to three different books: “Little Monkey’s Peeing Circus” by Tjibbe Veldkamp, “Mommy Laid an Egg: Or, Where Do Babies Come From?” by Babette Cole, and “Uncle Bobby’s Wedding” by Sarah Brannen. These three items – the latter of which appeared on ALA’s 2008 list of top ten most challenged books – constituted a third of the Colorado challenges to children’s materials in 2008. The 2009 challenges did not reveal any items that resulted in such widespread objections.
Results/Actions Taken
Seven out of 10 challenges (71%) resulted in no change in the item’s status at the library, compared to almost 9 out of 10 (88%) with no change in 2008. The percentage of challenges not pursued by the patron beyond the initial complaint stayed about the same as the previous year, but that of items removed from the collection or moved to another area of the library increased substantially, from 1 and 4 percent, respectively, in 2008 to 13 and 10 percent in 2009 (see Chart 3). The reason for these increases could be recoding of survey responses. For example, some entries reported the result of the challenge as “other,” then explained that a book was reclassified in the adult, rather than young adult, section of the library. Such a response was re-coded as “moved.” Reasons for the notable decrease in challenges resulting in “no change” are unclear.

Chart 3
Colorado Public Libraries, 2009
Results of Challenges

*The “removed” category includes websites that have been blocked by the library.
Reason for Challenge
The top three reasons for challenges in 2009 were the same as in 2008: sexually explicit (19%), offensive language (16%), and unsuited to age group (15%). Since LRS began conducting the follow-up survey, these reasons have been consistently cited among the most common criticisms. Challenges based on complaints of nudity dropped from nearly 1 in 5 (19%) in 2008 to just 1 in 10 in 2009, and objections to the portrayal of homosexuality in library materials also decreased, from 1 out of 10 (11%) to just 1 in 30 (3%).

Table 1
Colorado Public Libraries, 2009
Challenges by Reason

<table>
<thead>
<tr>
<th>Reason for Challenge</th>
<th>Frequency of Reason</th>
<th>Percent of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sexually Explicit</td>
<td>18</td>
<td>19%</td>
</tr>
<tr>
<td>Offensive Language</td>
<td>15</td>
<td>16%</td>
</tr>
<tr>
<td>Unsuitable for Age Group</td>
<td>14</td>
<td>15%</td>
</tr>
<tr>
<td>Nudity</td>
<td>9</td>
<td>10%</td>
</tr>
<tr>
<td>Violence</td>
<td>7</td>
<td>8%</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>8%</td>
</tr>
<tr>
<td>Anti-Family</td>
<td>6</td>
<td>6%</td>
</tr>
<tr>
<td>Insensitivity</td>
<td>4</td>
<td>4%</td>
</tr>
<tr>
<td>Homosexuality</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>Religious Viewpoint</td>
<td>3</td>
<td>3%</td>
</tr>
<tr>
<td>Sex Education</td>
<td>2</td>
<td>2%</td>
</tr>
<tr>
<td>Anti-Ethnic</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Racism</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Political Viewpoint</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Drugs</td>
<td>1</td>
<td>1%</td>
</tr>
<tr>
<td>Suicide</td>
<td>1</td>
<td>1%</td>
</tr>
</tbody>
</table>

For More Information on Challenges and Intellectual Freedom

- Visit the American Library Association Office of Intellectual Freedom (OIF) website: [http://www.ala.org/ala/aboutala/offices/oif/index.cfm](http://www.ala.org/ala/aboutala/offices/oif/index.cfm)