SCHOOL LIBRARY IMPACT STUDIES

A Review of Findings and Guide to Sources

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Executive Summary

An enormous volume of literature has been written on the topics of school libraries and children's literacy. Since the 1990s, especially the body of research known as "library impact studies" has grown dramatically, focusing on the correlation between school libraries and student achievement. In particular, the studies examine the positive effect of access to books; the effects of poverty on reading achievement; and the importance of staffing with certified librarians who play an important role in teaching critical thinking skills, leading the way for technology use, and inspiring literacy.

The purpose of this report is to present a summary of the current research on the impact of school libraries which can be used by the Harry & Jeanette Weinberg Foundation to better assess and develop current and future library initiatives.

School libraries -- "hubs of learning in public schools" -- are considered by students to be especially important as sources of books. Results from a survey conducted by Scholastic, Inc. and the Gates Foundation showed that 83 percent of all students got books from the school library, compared to 38 percent from public libraries and 20 percent from retailers.

Universal findings from more than 60 impact studies conducted in 22 states conclude that schools with a well-equipped library, staffed by a full-time, certified librarian and appropriate support staff contribute significantly to gains in student learning. High quality school libraries not only help students read more, but also help them learn how to use and process information better and to perform better on achievement tests. Levels of library funding, staffing levels, collection size and range, and the instructional role of the librarian all have a direct impact on student achievement.

Research confirms that the fundamental purpose of school libraries is to provide access to books and that access is the primary factor that leads to raising student test scores in all aspects of literacy. Access to books not only fosters an early love of learning and has a positive effect on reading achievement, but appears also to offset the impact of poverty. Results of studies show that children of poverty perform poorly on reading tests because they have very little access to books at home and in their communities. Unfortunately, at least one study indicates that students in most need – those attending schools with the highest concentration of students living in poverty – have access to the fewest school library resources. All aspects of literacy improve when children have access to books. If they have access to books, they read them, and they read them for longer periods of time.

Around–the-clock access to a library's digital resources is critical to 21st century learners, but a study of Pennsylvania public schools in 2012 suggests that access to a physical school library and librarian throughout the school day, as well as before and after school, is equally important. Pennsylvania students with such ample access scored "Advanced" on achievement tests.

Staffing of school libraries with full-time, certified librarians is also significant in impacting student achievement. At successful schools, in addition to providing access to books, they play a key role in teaching. As leaders and instructional partners who collaborate with teachers, especially in the early grades, librarians develop in their students a life-long love of reading, build critical thinking skills and digital literacy that prepare students for the 21st century workplace, and help students meet the Common Core State Standards. Studies conducted in at least 14 states show that students in schools with certified librarians consistently score better on standardized achievement tests in reading, compared with students in schools without certified librarians. Additionally, school

libraries that also have support staff working under librarians to assist with non-instructional needs are considered to be more effective than those without because they give the school librarian more time to teach and collaborate.

Teaching, especially information literacy and technology instruction, is central to the role of school librarians. Results of a 2012 survey of members of the American Association of School Librarians (AASL) conducted by the National Center for Literacy Education showed that 86.81 percent of respondents agreed that developing students' literacy was one of the most important parts of their job. Considerable attention is being given to the school librarian's role in helping teachers implement the Common Core State Standards. Since the Common Core State Standards are not a national curriculum and are adopted at different levels in each state, school librarians provide critical support to teachers and administration by recommending and teaching strategies and sources that develop reading comprehension and analysis of informational text in all content areas.

Studies consistently show that higher test scores result when school librarians are involved with instruction and the correlation is positive especially regarding disadvantaged students who often do not have access to resources and computers in their homes. By providing students equal guidance and access to print and digital resources, school librarians help close the gap between privileged and at-risk students.

Studies of third- and sixth-graders show that, in addition to improving literacy and achievement test scores, the presence of a teacher-librarian is the single strongest predictor of reading enjoyment.

Despite these many findings that underscore the importance of having certified librarians in public schools, about 25 percent of America's school libraries do not have one on staff, according to the American Library Association (ALA). The ALA reports that on average, there is one school librarian for every 953 students and cutbacks continue. For example, New York City is currently reducing staffing, claiming that advancements in technology, shifts in teaching practices, the addition of classroom libraries, and the trend toward smaller schools have made librarians not as necessary as they once were. Studies, however, counter this argument. The research expertise of librarians fits in with the critical-thinking skills the schools are trying to instill by implementing the Common Core.

Several other key factors also contribute to higher scores on standardized achievement tests: Longer and flexible hours of library operation, larger and newer collections, higher per-pupil expenditure in library-related resources, comfortable facilities that provide more than a place to check out books, and modern technological infrastructure.

Among many measures for assessing the quality of school libraries and correlating outcomes are: Usage - the number of visits to the library, length of time spent each visit, number of books checked out, number of events held in the library, and number of parent visits; Collection - size, currency, number of subscriptions, diversity (including bi-lingual material), and A/V.

Evidence from multiple library impact studies conducted across the U.S. offers the following conclusions:

- Access to books through school libraries develops life-long positive attitudes in students towards reading and helps them read more. The earlier the foundation can be laid, the better.
- Students consistently perform better on tests when there is a full-time, certified librarian and appropriate assistant on staff.
- Extended hours of operation and flexible scheduling have a direct impact on student achievement.
- Higher expenditures and larger, newer, and varied collections contribute to improved student test scores.
- Collaborative planning between school librarians and teachers enhance student learning.
- The higher the number of visits to the library, the higher the scores on student achievement tests.
- School libraries are essential to students by providing facilities and tools to prepare them for navigating the information age and entering the workplace of the future.
- School libraries have the ability to bridge the gap between privileged and at-risk students by providing equal access and resources for learning.
- School librarians empower students by instilling in them a love of reading from early ages; teaching new ways of learning; guiding them to read and think critically; and offering technology skills.

Introduction

Since the 1990s, numerous studies have examined the impact libraries have on student achievement and behavior, giving special attention to the librarian's important role in teaching, leading the way for technology use, and inspiring literacy. A significant portion of this research -- collectively known as "school library impact studies" – has been conducted by Dr. Keith Curry Lance and his associates at the Colorado Department of Education and the University of Denver who have looked at schools, so far, in 22 states and one Canadian province. For this report, in addition to these "impact studies," more than 100 documents from a wide range of authoritative sources such as the **American Association of School Librarians, Center for International Scholarship in School Libraries at Rutgers University, Literacy in Learning Exchange, National Center for Education Statistics, National Center for Literacy Education, Scholastic Research Foundation, state library associations,** and many more, were collected and reviewed.

The summary which follows organizes key findings from these studies under these topics:

- **Access**
- **Budget**
- **Collaboration/Cooperation**
- **Environment**
- **Instruction/Information Literacy Curriculum**
- **Learning and Motivation**
- **Outreach/Community**
- **Poverty**
- **Resources/Collection Development**
- **Staffing**
- **Technology**
- **Usage**

Requested by the Weinberg Foundation to look at the role of foundations involved in this field, I found that there are many groups such as the Robin Hood Foundation and the Annie E. Casey Foundation that sponsor initiatives on libraries and schools and address topics such as children's literacy and poverty. Some, like the Altman Foundation, support initiatives such as Library Connections that helps to revitalize inner-city elementary school libraries in New York by developing school library programs and expanding collections. Although information from these non-profit organizations is very useful, I could not find any foundations that have published studies with evidence outcomes measuring the overall impact of school libraries. This topic is open for further exploration. A partial list of foundations appears at the end of this document.

An extensive bibliography appears at the end of the document.

(*Note*: Some terms are used interchangeably in the context of this summary as well as in the studies reviewed. Professionally-trained librarians = *certified* or *endorsed*. Librarians = *library media specialists. Support staff* = Library Aide, Library Assistant, School Library Assistant, Library Paraprofessional, Library Clerk, Library Tech, Technology Assistant, Media Aide or Media Technician.)

Summary of School Libraries Research
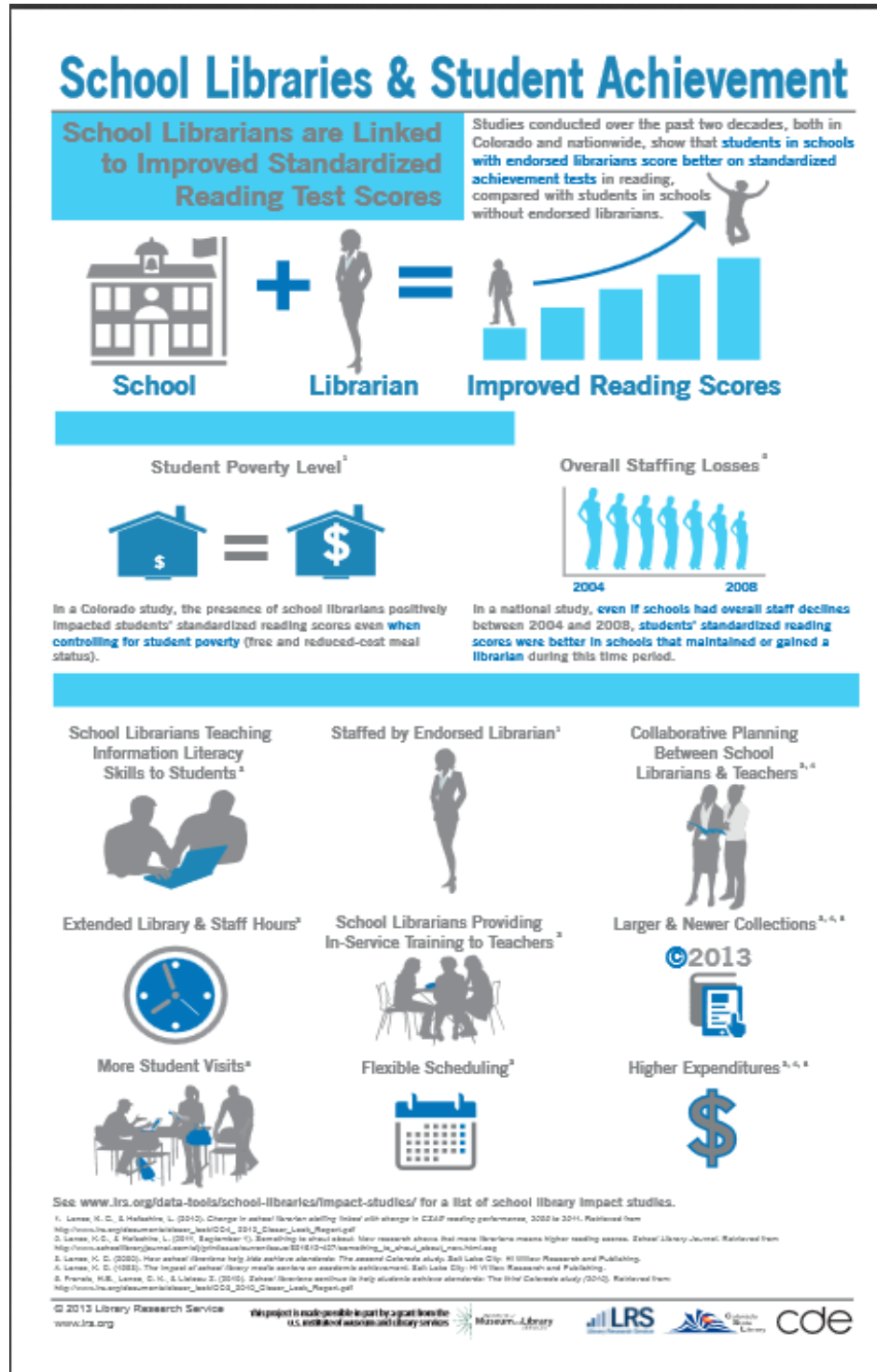
Universal Findings:

The level of library funding, staffing levels, collection size and range, and the instructional role of the librarian have a direct impact on student achievement.

More than 60 studies in nearly two dozen states confirm that schools with a well-equipped library, staffed by a full-time certified librarian and appropriate support staff contribute significantly to gains in student learning. For a full picture, surveys have been conducted to include perspectives of librarians, staff, parents, administrators (Shannon, 2012; Lance, 2013), and students (OH 2003; Bleidt, 2011).

- **A strong library program leads to higher scores.**
  Results from dozens of large-scale studies, involving over 8,700 schools and over 2.6 million students, have consistently demonstrated that students score an average of 10-20 % higher on reading and achievement tests when their school has a strong library media program. This effect holds, regardless of other school conditions such as student-teacher ratio, overall per-pupil spending, student demographics, and community socio-economic conditions. (Lance, et al., 2005; Lance, et al., 2003)

- **Access to better libraries means better reading.**
  Higher quality school libraries correlate with higher scores on reading tests done at state, national, and international levels. Aspects of school library quality that relate to reading achievement include: the size of the collection, the presence of a credentialed librarian, and overall staffing. When children have access to books, they read them a lot, and when they read a lot, all aspects of literacy improve.

- **School librarians provide much more than access to books.**
  They also serve as leader, instructional partner, information specialist, teacher and program administrator. They lead in building 21st century skills by collaborating with teachers to provide essential skills of critical thinking, digital literacy and technology; foster love of reading; help students meet the Common Core State Standards; and help students prepare to enter the workplace.

- **High levels of poverty mean little access to books.**
  Consistent evidence shows that children of poverty have very little access to books at home and in their communities. Lack of access to books is a major reason why these children do poorly on reading tests.

- **Access to books appears to offset the impact of poverty.**
  Many studies have appeared in the last few years indicating that access to books not only has a positive effect on reading achievement, but also that the positive impact of access is as large as the negative impact of poverty. This suggests that a good library can offset the effects of poverty on reading achievement.

For an extensive list of talking points confirming the benefits of school libraries, see the American Libraries Association website*: Libraries Matter: Impact Research* **http://www.ala.org/research/librariesmatter/**

The infographic below from the Library Research Service summarizes some of the universal findings from studies on libraries and achievement including: presence of a certified librarian, higher staffing levels, teaching information literacy, extended hours of operation, in-house teacher training, flexible scheduling, higher expenditure, larger and newer collections, collaborative planning between school librarians and teachers.

http://www.lrs.org/documents/school/school_library_impact.pdf

The infographic below from the American Association of School Librarians (AASL) highlights some important features of school libraries: Test scores are higher when there is a certified librarian and support staff; 21 state studies confirm school librarians support student achievement; when spending rises, better reading scores follow; librarians teach lifelong skills of information retrieval and evaluation; strong school libraries bridge the gap of access to high-speed broadband connectivity.

http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslissues/advocacy/AASL_infographic_strongstudents-2013.pdf

Findings by Topic:

The bullet points under each of the following topics are selections from major studies related to the topic. The references to the studies are included. Full citations and links can be found in the bibliography at the end of the document.

Access:

Longer hours of operation and flexible scheduling (including summer openings) help students perform better.

- Increased access to books is related to increased reading achievement. (Krashen, 2004, 2010; Lance, 2004; Lindsay, 2010)

- Access to materials in school libraries support early childhood learning by providing motivation. (New York Comprehensive Center, 2011)

- Schools with flexibly scheduled hours perform better. (IL 2005; ON 2009; CA 2006)

- Longer hours are especially important to economically disadvantaged students. (CA 2008, TX 2001)

- Flexible scheduling correlates with higher test scores. (Lance et al., 2005; Lance, et al., 2003)

- Students who have access to the library either during school hours or have electronic access outside the library show a significant success rate. (MO 2003)

- An overwhelming majority of students feel that the school library plays a critical role in their learning. Library attendance may be increased if students are given a greater opportunity to visit their school library. (Bleidt, 2011)

- Analysis of 44 studies found that access to print materials improved children's reading performance, was instrumental in helping children learn the basics of reading, caused children to read more and for longer periods of time, and produced improved attitudes toward reading and learning among children. (Lindsay, 2010)

Budget:

Increased expenditure per student makes students perform better.

- There is a significant relationship between larger school library budgets and student achievement. (PA 2000, IL 2005, CA 2008, MN 2004)

- Student achievement increases when the library media budget is adequate (e.g. in Texas, the average operating budget per student in elementary school libraries is $22.14). Nationally schools reporting on the 2012 AASL Longitudinal Survey spend an average of $13,500 annually on their Library Media programs including print, non-print, licensed databases, and other electronic access to information. (Maryland State Dept. of Educ., 2010)

- Increased library spending correlates with higher test scores. (Lance, et al., 2001; Baxter and Smalley, 2003)

- Better-funded school library media programs help to close the achievement gap for poor and minority students and poor and crowded schools. (IL 2005)

- Schools that invest more in library-related resources perform better. The conclusion to be drawn in a Mississippi survey: students in schools that invest more of their per-pupil expenditure in library-related resources tend to perform better on standardized tests at several grade levels. (Roberson, 2004)

- Higher achieving schools often spend twice as much—or more—on their school library programs as lower achieving schools. (PA 2000)

- Student achievement increases as the amount of money spent on print materials increases. (NC 2003; MO 2003)

Collaboration/Cooperation:

Increased and better collaboration of school librarians with teachers, principals, committees, and public libraries improve outcomes.

- The school librarian is encouraged to play a critical role in helping teachers implement the Common Core State Standards**.** (AASL; Gordon, 2012; Naylor-Gutierrez, 2013)

- Student achievement increases when library media specialists spend more time on working collaboratively with teachers; Library media specialists are school leaders who meet with principals regularly; provide professional development to teachers; and serve on curriculum and standards committees. (IA 2002)

- Test scores improve when a certified librarian with clerical support are on staff because the librarian is able to focus on collaboration with teachers and staff rather than day-to-day operations. (CA 2006; ID 2009; IA 2002; PA 2000)

- Leadership activities by the librarian in providing professional development for teachers, serving on key committees, and meeting regularly with the principal, is encouraged and contributes to learning. (IN 2007, ID 2009)

- Teachers were three times more likely to rate their literacy teaching as excellent when they collaborated with librarians. (ID 2009)

- Effective school library programs will not be realized without strong collaborative partnerships between school principals and school librarians. (Shannon, 2012)

- Librarians promote student learning through technology, literacy, and collaboration with teachers. (Dees, 2010)

- Librarian collaborations with classroom teachers range from simple resource provision to collaborative lesson planning and delivery. (Small, 2010)

- Students achieve more academically when their teachers and school librarians plan and deliver instruction collaboratively. (ALA, School Library Program Talking Points)

Environment:

The school library should be envisioned as a classroom as well as a welcoming place of learning with spaces for individual and group uses. The facility should be flexible and customizable to support multiple activities.

- Use of technology in the library must include design aspects that support learning, including adjustable lighting, ample electrical connections, sound control, and space for expansion. School library space must also accommodate computer learning that is separated from quiet reading, group study, circulation, reference work, and other learning activities. (National Institute of Building Sciences, 2011)

- The library's welcoming, safe, and comfortable environment is a positive influence on library use for both students and teachers. (Small, 2010)

- Libraries are evolving into "libratories" – environments where a wide variety of learning activities and projects can take place: project space, design studio, community meeting and presentation space, and research and development lab. (Trilling, 2010)

- Findings from surveys of student perceptions imply that the school library is more than just a place to check out books. Provision should also be made for resources for research, a quiet place for reading and writing, space for students to work collaboratively, and a highly trained library staff to be present to support student learning. (Bleidt, 2011)

- "There should be different types of seating for different learning styles, easy chairs and straight chairs, and areas for students to be seated together or in private." (Dolan, 2004 – Quote, Carolyn Markuson)

- Facility planning considerations: 1) size of the student body 2) attendance patterns of students in the library 3) age and learning styles of students 4) teaching methods 5) Number of library staff 6) scheduling of students to the library 7) size of the collection, materials, and equipment and 8) technologies to be located in and managed from the media center.

  Most states publish design guidelines for their school libraries. Examples: Pennsylvania and Virginia. http://www.psla.org/assets/Documents/Publications/PDE-Documents/PDE20Guide20For20School20Libraries20201120FINAL.pdf ; http://www.doe.virginia.gov/support/facility_construction/school_construction/regs_guidelines/guidelines.pdf

Instruction/Information Literacy Curriculum:

Librarians play an essential role in teaching 21st century skills supporting implementation of Common Core State Standards, integrating technology and digital tools into instruction, and developing student literacy.

- 86.81% of librarians and teachers surveyed in 2012 felt that developing students' literacy was one of the most important parts of their job. (National Center for Literacy Education, 2012)

- School librarians impact teachers through instructional support to teachers and facilitating student access to infrastructure and instruction. (New York Comprehensive Center, 2011)

- Librarians and library programs appear to positively influence students' research skills development and motivation for research and inquiry, particularly in the use of information technologies such as databases and the Web; reading skills development and test scores; and development of reading interests. (NY 2010)

- Higher test scores result when school librarians are involved with instruction. (ID 2009, MA 2000, WI 2006, NJ 2010, OH 2003)

- Greater frequency of library-centered instruction and collaborative instruction between school librarians and teachers improve performance. (Lance, et al., 1999; Lance, et al., 2000; Lance, et al., 2005; Lance, et al., 2001)

- Involving librarians in curriculum decisions and implementation is critical. (Todd, 2012)

- School librarians play an important role as instructional partners and collaborate with classroom and STEM subject teachers to teach and integrate different literacy practices into the curriculum. School librarians also build connections between student information/research needs, curriculum content, learning outcomes, and information resources as they support the overall educational community in the school. (Subramaniam, 2012)

- Elementary school achievement is distinguished by the amount of time school library staff spend teaching students and teachers how to access and use print and electronic information resources. At higher achieving schools library staff spend three days on such activities for every two by lower achieving schools. At higher achieving schools at all grade levels, library staff are involved in committees and provide in-service training to teachers. Library staff at lower-achieving schools usually do not engage in these activities at all. (PA 2000)

- More students score "Advanced" on reading and writing when administrators rate as "Excellent" the library program's teaching of all four AASL 21st Century Learner Standards. The positive impact of the library program's teaching of these standards on scores is more dramatic on writing than reading. (AASL, 2007)

- A key link exists between dynamic school library programs and the development of 21st century skills such as critical thinking and problem solving. (Hardy, 2010)

Learning and Motivation:

School libraries are "powerful agents of learning, central to engaging students in the transformation of information into deep knowledge and understanding, and providing them with life skills…." (Gordon, 2012)

- Students learn 21st century learning skills through state-of-the-art school library programs. (ALA, School Library Program Talking Points)

- The school library program plays an important role in helping students get an overall conception of the information-seeking process. (ALA, School Library Program Talking Points)

- Interactions with a school librarian aid children and teens in becoming confident, competent, and independent learners. (ALA, School Library Program Talking Points)

- School libraries play an important role in the development of reading skills in early learners (birth to age 8 – National Association of Young Children) by providing access to materials and books and by motivating and engaging them. (Krashen, 2006)

- School libraries boost students' confidence as information seekers. In Delaware, 90% of the students recognized that the school library had helped to boost their confidence as proficient information seekers and users, enabling them to work independently; 91.8% of the students appreciated the school library's help regarding sorting and analyzing information. (DE 2005)

- Librarians and library programs positively influence development of students' reading interests. (NY 2010)

- Many children begin school today at a disadvantage. They may not have been read to on a regular basis, and many have never been to a library. It is the school librarians' responsibility to welcome these young children into the library and develop programming that provides them with beginning literacy experiences. (Schwindt, 2010)

- The school library serves a major role in supporting early learning by motivating early learners to read. (Krashen, 2006)

- A study of schools in Ontario, Canada indicated that the greatest predictor of reading enjoyment by third graders is the support of a school librarian. (Scholastic, 2008)

- School libraries and librarians support at-risk students through personalized instruction, networks of support, and access to 21st century technology and technological skills. Schools with effective library programs have seen increases in graduation rates and higher performance levels starting earlier in students' academic careers. (New York Comprehensive Center, 2011)

Outreach/Community:

School libraries can serve a wider purpose by reaching out to families and the community.

- School librarians are encouraged to reach out to families and the greater community through a variety of programs and services such as those in New York City. (NY 2010)

- School libraries should become vibrant centers for family literacy partnerships. (Lesaux, 2010)

Poverty:

School libraries have the ability to bridge the gap between privileged and at-risk students by providing equal access and resources for learning.

- Results of studies show that children of poverty perform poorly on reading tests because they have very little access to books at home and in their communities. Unfortunately, at least one study indicated that students in most need – those attending schools with the highest concentration of students living in poverty – had access to the fewest school library resources. (Pribesh, 2011)

- Results of some recent studies have suggested that access to books, either at home or at the school library, can mitigate or balance the effect of poverty. The positive impact of access to books on reading achievement is about as large as the negative impact of poverty. (Evans, 2010; Schubert, 2010; Achterman, 2008; Krashen, 2011)

- Lower income parents are more likely to view library services as very important. These conclusions reinforce the importance of families and libraries in children's reading habits. (Miller, 2013)

- Librarians positively correlate with reading scores using poverty as a control variable. In a Colorado study endorsed and non-endorsed librarians were positively correlated with advanced reading scores and negatively correlated with unsatisfactory scores. With poverty as a control variable, both endorsed and non-endorsed librarians had positive and statistically significant correlations with reading scores. These relationships are stronger for endorsed librarians than non-endorsed ones.

What did not change was the lack of relationship between non-endorsed library assistants working without a librarian and reading scores. Library assistants working without supervision do not have any impact on reading scores, either advanced or unsatisfactory. (CO 2012)

- A school library program that is adequately staffed, resourced, and funded can lead to higher student achievement regardless of the socioeconomic or educational levels of the community. (Scholastic, 2008)

- The shortfall in reading proficiency is especially pronounced among low-income children. Of the fourth-graders who took the National Assessment of Educational Progress (NAEP) reading test in 2009, 83% of children from low-income families and – 85% of low-income students who attend high-poverty schools – failed to reach the "proficient" level. (Feister, 2010)

Resources/Collection Development:

Collections are measured by the number of print volumes, currency, number of subscriptions, and audiovisual equipment/resources. Availability of bi-lingual material is becoming an important topic.

- The school library is especially important as a source of books. The results of a survey of 40,000 teachers conducted by Scholastic, Inc., and the Gates Foundation showed that 83% of all students said they got books from the school library, compared to 38% from public libraries and 20% from retailers. *(http://www.ilovelibraries.org/public-and-school-libraries-decline-when-we-need-them)*

- Student achievement increases when the library media collection is adequate and students borrow materials frequently; the library media center has computers with access to library resources, online databases, and the Internet; the library program has a collection development policy. (IA 2002)

- Students of effective libraries view their library as the main provider of resources when working on assignments. They recognize the librarian's expertise in navigating the Internet. (Hay, 2006)

- Larger collections of print and electronic resources with access at school and from home raise test scores. (IL2005; TX 2001; CA 2008; NJ 2010; PA 2000; IA 2002)

- Size and currency of collection correlate with higher test scores. (Burgin and Bracy, 2003; Lance, et al., 2000; Smith, 2001)

- Collective evidence suggests that the number of books per student in a school library is a significant predictor of reading achievement. This is further enhanced when there is a school librarian to guide the choices of material and to motivate. (Many studies by Krashen, 1985-2001)

- Successful schools have more library resources. (Roberson, 2004)

- Availability of bi-lingual books in school libraries benefits non-English as well as English speaking students. (Brisk, 2005)

Staffing:

Studies show that the larger the staff, the higher the student achievement. Statistics vary regarding full/part time certified librarian and support staff. (See the AASL's "Position Statement on Appropriate Staffing for School Libraries". http://www.ala.org/aasl/advocacy/resources/position-statements/staffing)

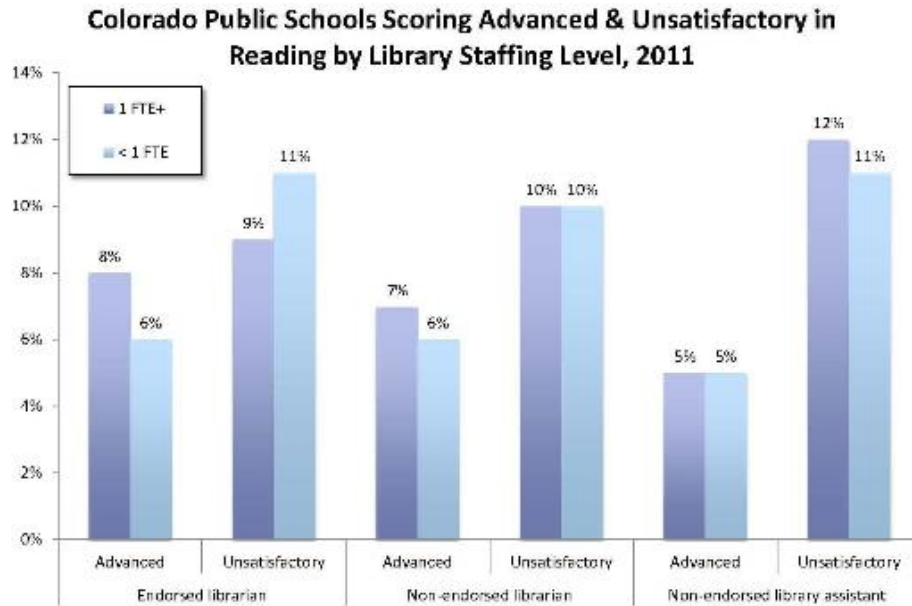- More librarians = higher reading scores. (Lance, 2011)

Point and Percent Changes in Fourth-Grade NAEP Reading Scores for States with More and Fewer School Librarians, 2004–2005 to 2008–2009

States with *more* librarians

Students (total states)	2008–2009 scores	2004–2005 scores	Point change	Percent change
All students (26)*	220.35	217.04	3.31	1.5%
Poor students (26)**	207.35	203.19	4.16	2.0%
Black students (22) ***	204.41	198.77	5.64	2.8%
Hispanic students (21)***	208.90	205.38	3.52	1.7%
English language learners (17)***	189.29	189.18	0.11	0.0%

States with *fewer* librarians

Students	2008–2009 scores	2004–2005 scores	Point change	Percent change
All students (24)*	220.13	219.08	1.05	0.5%
Poor students (24)**	206.58	205.58	1.00	0.5%
Black students (20)***	203.35	199.75	3.60	1.8%
Hispanic students (19)***	204.74	204.37	0.37	0.2%
English language learners (14)***	184.07	189.43	-5.36	-2.8%

* Differences for all students are statistically significant at $p = .005$ ($t = 2.960$).

** Differences for poor students are statistically significant at $p = .001$ ($t = 3.422$).

*** Differences for black, Hispanic, and ELL students were not statistically significant, most likely because many states in both comparison groups did not report these students' scores.

- Student achievement increases when there is adequate staffing, including at least one full-time certified library media specialist and full-time support person in the library media center. In Pennsylvania and Colorado, test scores increased as much as 15% in schools that had adequately staffed libraries. As library staff increases, there is more time spent on instructional activities. (IA 2002; PA 2012)

- There is a positive and statistically significant relationship between advanced reading levels and endorsed librarian staffing trends. The Colorado study shows that schools with at least one full-time endorsed librarian averaged significantly higher advanced CSAP reading scores (8% vs. 6%) and significantly lower unsatisfactory scores (9% vs. 11%) than schools with less than one full-time endorsed librarian. (CO 2012)

- Higher library staffing levels are linked to higher reading performances for elementary, middle, and high schools. (AK 2010; CA 2008; CO 2010; FL 2003; IL 2005; IN 2010; IA 2002; MA2010; MI 2003; MN 2004; MO 2004; NC 2003; NM 2002; NY 2010; PA 2000; ON 2006/2009; OR 2001; TX 2001; WI 2006)

- Larger staff correlates with higher test scores. (Lance, et al., 1999; Baumbach, 2002; Lance, et al., 2001; Lance, et al., 2000; Smith, 2001)

- Presence of certified school librarians correlates with higher test scores. (Lance, et al., 1999; Callison, 2004; Rodney, et al., 2003; Baxter and Smalley, 2003; Todd, et al., 2004; Lance, et, al., 2000; Whelan, 2004)

- Consistently, reading and writing scores are better for students who have a full-time certified librarian than those who do not. Students who are economically disadvantaged, black, Hispanic, or have disabilities benefit proportionally more than general students. Students who are poor or otherwise disadvantaged, but who have full-time librarians, are at least twice as likely to have advanced writing scores [on the state standardized tests] as their counterparts without full-time librarians. (PA 2012)

- An Ohio study showed that 99.44% of students surveyed who had access to school libraries with certified school librarians felt that the library helped them learn. (OH 2003)

- In Florida elementary schools where library programs are staffed 60 hours per week or more, there is a 9% improvement in test scores over those staffed less than 60 hours. (FL 2003)

- Many schools have library assistants, ideally working under the supervision of a certified librarian; however, many school libraries, especially at the elementary level, are now run solely by assistants. Employment of library assistants is expected to grow 9% from 2010 to 2020, about as fast as the average for other occupations. (*Occupational Outlook Handbook*, 2012)

- Schools with effective libraries and librarians tend to have higher assessment scores than schools that do not. (New York Comprehensive Center, 2011)

- Reading test scores tend to be higher when there is a librarian, a full-time librarian rather than a part-time one, a part-time librarian rather than no librarian at all.   As the following chart shows, higher levels of librarian staffing lead to longer hours of operation, higher levels of library staff activity and higher student usage, and consequently higher test scores. (CO 2012, chart 3)

Colorado Public Schools Scoring Advanced & Unsatisfactory in Reading by Library Staffing Level, 2011

- The higher the level of librarian staffing, the greater the percentage of library media staff hours can be dedicated to: Delivering library/information literacy instruction to students; planning instructional units cooperatively with teachers; and providing in-service training to teachers and other staff. Regardless of the level of librarian staffing, the more library media staff time devoted to these activities, the higher the test scores. (Whelan, 2004)

- When there is support staff available that can assume day-to-day library activities, the librarian can spend more time on teaching and collaborating with faculty and administration. The following chart demonstrates effectiveness when there is at least one assistant. (Colorado Dept. of Educ., 2012)

The school librarian has...	
One or more full-time support staff (para-librarian) assigned to the library that assists users with non-instructional needs.	**Highly Effective**
One full-time support staff assigned to the library to assist users with non-instructional needs; volunteers provide assistance to the para-librarian.	**Effective**
One support staff assigned to the library part-time to assist users with non-instructional needs; volunteers provide assistance to the para-librarian.	**Progressing Toward Effective**
No support staff assigned to the library and/or volunteers replace para-librarian role.	**Ineffective**
	Not evident

- Research findings on school librarians and their association with students' test scores are consistent: regardless of how rich or poor a community is, students tend to perform better on reading tests where, and when, their library programs are in the hands of endorsed librarians. At schools where library programs gain or maintain an endorsed librarian even when school budgets get tight, students tend to excel. (CO 2012)

- There is a significant relationship between advanced reading levels and endorsed librarian staffing. Schools that either maintained or gained an endorsed librarian between 2005 and 2011 tended to have more students scoring advanced in reading in 2011 and to have increased their performance more since 2005 (45% and 49%, respectively) than schools that either lost their librarians or never

had one (33% and 29%). Schools that either lost a librarian during that period or never had one (33% and 39%) tended to have fewer students scoring advanced in 2011 and to have seen lesser gains—or losses—since 2005 than schools that maintained or gained a librarian (23% and 18%). (CO 2012)

- Elementary schools with a certified library media specialist have higher test scores.
  In elementary schools with a certified (vs. non-certified) library media specialist, students have significantly higher achievement scores on the 4th grade ELA test. (NY 2010)

- Student reading achievement in elementary and secondary schools is related to increases in school library media program spending. In Minnesota schools with above average student scores on the Grade 3, 5, and 8 reading tests, 66.8% were schools where the media specialist worked full-time. Twice as many schools with above average scores had full-time media specialists. (MN 2004)

- Schools with certified school librarians have higher language arts scores. (NY 2010)

Technology:

School librarians perform an integral role in promoting the effective use of educational technologies in their schools.

- Principals often perceive their librarian as the technology leader in the school. Librarians have an impact on both teachers' and students' technology use. (NY 2010)

- Modern technological infrastructure improves learning. (PA 2000; OH 2003; WI 2006; DE 2005) When there is access to this infrastructure test scores are higher and more striking for minorities and disadvantaged students. (PA 2012)

- Library media specialists have an important role to play regarding the use of technology to support teaching and learning in their schools. Seventy-four percent of respondents in a New York study provide guidance to students in the use of digital resources at least once a week. (NY 2010)

- School libraries play a particularly important role in lowering achievement gaps and supporting at-risk students by providing an environment where students can use technological equipment that they may not have access to outside of school. (New York Comprehensive Center, 2011)

Usage:

The more students use the library, the better the test scores. Usage is measured by the number of visits to the library, the number of books and materials checked out, and the amount of time spent in the library.

- Student achievement increases when students visit the school library frequently and it is open longer. (IA 2002; ID 2009)

- The number of visits to the library can play a part in student achievement. (CO 2010)

- Library usage correlates with student achievement. (MO 2003)

- Library attendance may be increased if students are given greater opportunity to visit the school library. Teachers might ensure students are going to the library on a regular basis by considering making library attendance part of the academic schedule and opening the library before and after the school hours. (Bleidt, 2011)

Staff Roles and Responsibilities:

(Source: AASL Position Statement on the School Librarian's Role in Reading, 2011)

Librarian

- School libraries provide students, staff, and families with open, non-restricted access to a varied high quality collection of reading materials in multiple formats that reflect academic needs and personal interests.
- School librarians practice responsive collection development and support print-rich environments that reflect the curriculum and the diverse learning needs of the school community.
- School librarians take a leadership role in organizing and promoting literacy projects and events that engage learners and motivate them to become lifelong readers.
- Teachers, reading specialists, and school librarians select materials, promote curricular and independent use of resources, including traditional and alternative materials, and plan learning experiences that offer whole classes, small groups, and individual learners an interdisciplinary approach to literacy learning.
- Classroom and library collaborative instruction is evidence-based, using research in librarianship, reading, English-language arts, and educational technology in order to maximize student learning. School librarians partner with classroom teachers, specialists and other literacy colleagues to make decisions about reading initiatives and reading comprehension instruction, and to develop all learners' curiosity in, and intellectual access to, appropriate resources in all formats and media.
- When learners follow an inquiry process they assess and use reading comprehension strategies. The skills identified in the *Standards for the 21st-Century Learner* align with the reading process.
- Opportunities for planned and spontaneous library use best serve learners as they identify, analyze, and synthesize ideas and information by using a wide range of materials in a variety of formats and media. Availability of library resources and professional staff at point of need develops intellectual behaviors that transfer to future academic pursuits and lifelong academic and public library use.
- Along with classroom and reading specialist colleagues, school librarians provide and participate in professional development in reading that reflects current research in the area of reading instruction and promotion.

Support Staff (Library Aide, Library Assistant, School Library Assistant, Library Paraprofessional, Library Clerk, Library Tech, Technology Assistant, Media Aide or Media Technician)

- Monitor students under the supervision of the school librarian.
- Prepare, process, and receive orders and process materials for use.
- Maintain records, inventories, and bookkeeping accounts.
- Assist in maintaining an online catalog; electronic circulation and patron records; and current records in union catalogs.
- Assist in preparing correspondence, reports, and bibliographies.
- Assist students and teachers in using school library resources and technologies.
- Locate and retrieve materials and equipment for teachers and students.
- Assist in the operation and minor repair of AV equipment and computer hardware.
- Assist in weeding and the maintenance and repair of materials.
- Perform interlibrary loan activities and maintain records.
- Check lists and bibliographies to determine availability of materials.
- Perform circulation tasks and shelving of materials in all formats.
- Assist in the preparation of displays and bulletin boards.
- Assist in the compilation of statistics.
- Promote a positive relationship with students, staff, and community.
- Participate in professional development to include information and technology.

SOURCES

- **Summaries, Bibliographies, and Indexes**
- **Library Association Resources**
- **Academic Research Centers**
- **Periodicals**
- **Library Impact Studies by State**
- **Other Studies and Reviews**
- **Foundations**

SUMMARIES, BIBLIOGRAPHIES, AND INDEXES

David Loertscher's Bibliography of Studies. http://www.davidvl.org/research.html

Library Research Service. **http://www.lrs.org/data-tools/school-libraries/impact-studies/** Links to and overview of library impact studies.

Mansfield University. (2011). School Library & Information Technologies Department. *School Library Research Summarized: A Graduate Class Project.* An index and review of school library impact studies.

LIBRARY ASSOCIATION RESOURCES

American Association of School Librarians (AASL)

- "AASL Executive Summary of the 2012 NCLE Survey."
  http://www.ala.org/aasl/sites/ala.org.aasl/files/content/researchandstatistics/AASL_ExecSummary_2012NCLEsurvey.pdf

- "Empowering Learners: Guidelines for School Library Programs." Chicago. 2009. This study formerly introduced the role of "leader" for school librarians. It also stated:"All children deserve equitable access to books and reading. "**http://www.ala.org/aasl/standards-guidelines/program-guidelines**

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  http://aasl.ala.org/essentiallinks/index.php?title=Student_Achievement.

- *Position Statement on the School Librarian's Role in Reading*. 2011. Web. June 27, 2013.
  http://www.ala.org/aasl/advocacy/resources/position-statements/reading-role

- *School Libraries Count! National Longitudinal Survey of School Library Programs.* Chicago: American Association of School Librarians, 2012. Annual report summarizes overall results and results by school level and enrollment, and more. Shows what school library media programs in the US are reporting on staffing and hours.
  http://www.ala.org/aasl/sites/ala.org.aasl/files/content/researchandstatistics/slcsurvey/2012/AASL-SLC-2012-WEB.pdf

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- *Standards for the 21st Century Learner*. 2007.
  http://www.ala.org/ala/mgrps/divs/aasl/guidelinesandstandards/learningstandards/standards/cfm

- "Strong Libraries Build Strong Students." (Infographic)
http://www.ala.org/aasl/sites/ala.org.aasl/files/content/aaslissues/advocacy/AASL_infographic.pdf

American Library Association (ALA)

- "Add it Up!" Research and statistics to help advocates make the case for libraries at every stage of youth development and education. **http://www.ala.org/research/librariesmatter/additup**

- "The 2012–2013 Special Presidential Task Force on School Libraries."
http://www.ala.org/advocacy/advleg/schoollibrarytaskforce

- *The Condition of U.S. Libraries: School Library Trends, 1999-2009.*
http://www.ala.org/research/sites/ala.org.research/files/content/librarystats/librarymediacenter/Condition_of_Libraries_1999.20.pdf

- *Educational Literacy Impact.* **http://www.ala.org/research/librariesmatter/taxonomy/term/60**

- Libraries Matter: Impact Research **http://www.ala.org/research/librariesmatter/**

- Position Statements. **http://www.ala.orf/aasl/advocacy/resources/position-statements**

- *School Library Fact Sheet*, 2013. **http://www.alawash.org**

- "School Library Program Talking Points - Kindergarten-Middle School 6-12."
http://www.ala.org/advocacy/advleg/advocacyuniversity/additup/6to12/anntk_school

- *The State of America's Libraries*. 2013. pp. 28-33.
Bleak forecasts for school libraries.**http://www.ala.org/news/sites/ala.org.news/files/content/2013-State-of-Americas-Libraries-Report.pdf**

International Association of School Librarianship (IASL)

- Various research reports. **http://www.iasl-online.org/research/**

International Federation of Library Associations (IFLA)

- Publications from School Libraries and Resource Centers **http://www.ifla.org/publications/19**

International Reading Association (IRA)

- *Providing Books and Other Print Materials for Classrooms and School Libraries.* Web. July 3, 2013.
http://www.reading.org/Libraries/position-statements-and-resolutions/ps1039_libraries_2.pdf

State library associations such as…
Maryland Association of School Librarians
- *National Studies Connect School Libraries and Student Achievement.*
http://www.msde.maryland.gov/NR/rdonlyres/EC67FB12-FE6B-464A-A2AD-D0C6307773E3/24434/National_Studies_Connect_School_Libraries__Student.pdf

National Association of Bi-Lingual Education (NABE)
http://www.nabe.org/ Reviews studies on libraries and bi-lingual learning.

ACADEMIC RESEARCH CENTERS

Florida State University, Partnerships Advancing Library Media (PALM)
Studying the leadership role of media specialists and their impact on school technology.
http://www.lsi.fsu.edu/Our-Centers/Palm-Center-Partnerships-Advancing-Library-Media/

Kent State University. Institute for Library and Literacy Education (ILILE)
Established to provide local, regional and national leadership in fostering successful collaboration among K-12 teachers and school library media specialists who are concerned with advancing library and information literacy in the PK-12 school curriculum. The goal of the Principal Project, funded by ILILE, was to collect and disseminate resources to help administrators to better understand the role of the certified library media specialist and the importance of a strong library media program.
http://www.ilile.org/initiatives/principal_project/Admin/index.html

Rutgers University, Center for International Scholarship in School Libraries (CISSL)
investigating evidence-based practice, guided inquiry and international school librarianship. The studies will give insight into quality teaching practices and the range of tools available to measure student achievement.
http://cissl.rutgers.edu/

Syracuse University, Center for Digital Literacy (CDL)
Studying the impact of information, technology and media literacies inside and outside the library setting. Funding from the Kauffman Foundation. The result of their recent New York study showed that even after controlling for poverty level, students at schools with certified librarians have, on average, higher reading achievement test scores than students at elementary schools without them. **http://digital-literacy.syr.edu/**

PERIODICALS

Knowledge Quest **http://www.ala.org/aasl/knowledge-quest**

School Libraries Worldwide **http://www.iasl-online.org/pubs/slw/index.htm**

School Library Journal **http://www.slj.com/**

School Library Monthly **http://www.schoollibrarymonthly.com/**

School Library Research **www.ala.org/aasl/slr**

Teacher Librarian **http://www.teacherlibrarian.com/**

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CA Siminitus, Jackie. (2012). *California School Library Media Centers and Student Achievement.* Government, Education and Medical Markets, SBC Pacific Bell. **http://www.cde.ca.gov/ci/cr/lb/documents/k12libraries.pdf**

CO Lance, Keith Curry, Lynda Welborn, and Christine Hamilton-Pennell. (1992). *The Impact of School Library Media Centers on Academic Achievement.* Denver, CO: Colorado Dept. of Education. (Available through *ERIC*) **http://www.eric.ed.gov/PDFS/ED353989.pdf**

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Key Findings**:** 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. The evidence indicates that library staff can have a positive impact on all students.
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Key Findings: Students at schools that gained or maintained an endorsed librarian to manage the library program averaged higher Colorado Student Assessment Program (CSAP) reading scores and higher increases in those scores over time than students at schools whose library programs were run by either non-endorsed librarians or library assistants. **http://www.lrs.org/documents/closer_look/CO4_2012_Closer_Look_Report.pdf**

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FOUNDATIONS WITH PUBLIC SCHOOL OR READING INITIATIVES (Partial list)

Altman Foundation
http://www.altmanfoundation.org/programs/education/objective_1/2013
Supports after-school reading programs. Sponsors "Library Connections" program.

Annie E. Casey Foundation
http://www.aecf.org/
Kids Count Data Center

Ball Foundation
http://www.ballfoundation.org/ei/index.html
Invests in the initiatives of the National Center for Literacy Education.

Laura Bush Foundation
http://www.laurabushfoundation.com/
Grants funds to expand, update and diversify collections of school libraries.

Cotsen Foundation for the Art of Teaching
http://cotsen.org/
Studies collaborations among the teaching staff.
Gates Foundation

http://www.gatesfoundation.org/search#q/k=school%20libraries
Early program only to bridge digital divide.

Heart of America Foundation
http://www.heartofamerica.org/about.htm
Revitalizes school libraries.

The Joan Ganz Cooney Center
http://www.joanganzcooneycenter.org/
How museums and libraries support early learning.

Ewing Marion Kauffman Foundation
http://www.kauffman.org/Section.aspx?id=Education
Studies on effective teaching and learning.

Knight Foundation
http://knightfoundation.org/funding-initiatives/knight-library-initiative/
Libraries Initiative for public libraries to become digital.

Literacy in Learning Exchange
 http://www.literacyinlearningexchange.org/

Lois Lensky Covey Foundation
http://www.loislenskicovey.org/
Grants for books.

Panasonic Foundation
http://www.panasonictoolkit.org/foundation/Site.nsf/ID/home

Pew Research Center
http://libraries.pewinternet.org/files/legacy-pdf/PIP_Library_Services_Parents_PDF.pdf
Parents' attitudes about reading and libraries (public).

Revson Foundation
http://www.revsonfoundation.org/
Public libraries.

Robin Hood Foundation
http://www.robinhood.org/initiatives/library
The Library Initiative targets poverty in New York City.

Schott Foundation for Public Education
http://www.schottfoundation.org/about/mission
Published "Lost Opportunity: a 50-State Report on the Opportunity to Learn in America."
http://www.otlstatereport.org/national/summary

The Wallace Foundation
http://www.wallacefoundation.org/knowledge-center/Libraries/Pages/Findings-From-the-National-Library-Power-Program.aspx

Verizon Foundation
http://www.verizonfoundation.org/our-focus/#education
Supports technology and training initiatives in public schools.