

Delaware School Libraries Master Plan

Quality School Libraries = Higher Student Achievement

August 2016

Written by

Bill Wilson, Himmel and Wilson, Library Consultants
Christopher Kelly, Institute for Public Administration
Kelly Sherretz, Institute for Public Administration

With research assistance from

Public Administration Fellows Heather Brody, Nicholas Brock,
Annie Gould, Anna Keleher, Emma Odren, and Rachel Pleet

With contributions from

Ed Freel, Institute for Public Administration

Prepared by the

Institute for Public Administration
University of Delaware

Prepared for the

Delaware School Libraries Council

Funded by the

Delaware Department of State
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Preface & Acknowledgments

As the Director of the Institute for Public Administration at the University of Delaware, I am pleased to provide this report, *Delaware School Libraries Master Plan: Quality School Libraries = Higher Student Achievement*, to the Delaware School Libraries Council. In the 2013 *Delaware School Libraries Annual Report*, the Delaware School Libraries Council requested the development of a statewide master plan for school libraries. This report was commissioned to fulfill that request.

The purpose of this report is to serve as the guiding document for Delaware's school libraries. It identifies the characteristics of a quality school library and examines the impact that one can have on student learning outcomes. The report then includes an analysis on the current quality of Delaware's school libraries and provides recommendations in four categories that will lead to their improvement.

The Institute for Public Administration (IPA) is grateful to Secretary of State Jeffrey W. Bullock and the Delaware Department of State, Division of Libraries for providing funding support for this work. IPA is also appreciative of the guidance provided by the Delaware School Libraries Council, the Delaware Association of School Librarians, and the many interview, survey, and focus-group participants. I would like to thank both Annie Norman and John Monahan for the countless hours they spent supporting this project. I also thank Bill Wilson, Kelly Sherretz, Christopher Kelly, Ed Freel, Heather Brody, Nicholas Brock, Annie Gould, Anna Keleher, Emma Odren, and Rachel Pleet, for their work on this report. Additional thanks go to IPA Policy Specialist Sarah Pragg for formatting and editing the report.

IPA addresses the policy, planning, and management needs of its partners through the integration of applied research, professional development, and the education of tomorrow's leaders. This Master Plan is an important part of this effort, as quality school libraries can lead to improved learning outcomes for all students, regardless of race or socioeconomic status.

Jerome R. Lewis, Ph.D.

Director, Institute for Public Administration

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Executive Summary

Over the past two decades, the relationship between the quality of school libraries and student performance has been the focus of dozens of state-level studies. Simply stated, these studies confirm that access to high-quality school library services results in better student performance. The declaration used in the title of this report, ***Quality School Libraries = Higher Student Achievement***, is not a speculative statement. Research affirms this equation.

Most research indicates that the following characteristics of school libraries lead to improved learning outcomes for students:¹

- A full-time certified/qualified librarian at the building level
- Adequate support staff to enable the librarian to perform professional duties
- Adequate expenditure for new resources to ensure student access to recent, relevant content
- High level of collaboration between librarians and teachers and librarians and students
- Flexible scheduling that enables the librarian to interact with teachers and students
- Access to up-to-date technological infrastructure and online resources
- Access to professional development and networking opportunities for library staff

Unfortunately, school libraries in Delaware are, in general, understaffed, underfunded, and unequipped of up-to-date collections and resources. Librarians that do work in schools, in many cases, are unable to carry out professional duties because they must complete day-to-day tasks related to library management and additional staffing/instructional assignments. Oftentimes, librarians are unable to participate in professional development opportunities and to collaborate with teachers and students due to their fixed schedules (Focus Groups, 2015). The current state of school libraries in Delaware is dire, which creates a situation where students are unable to receive the measurable benefits of quality school libraries.

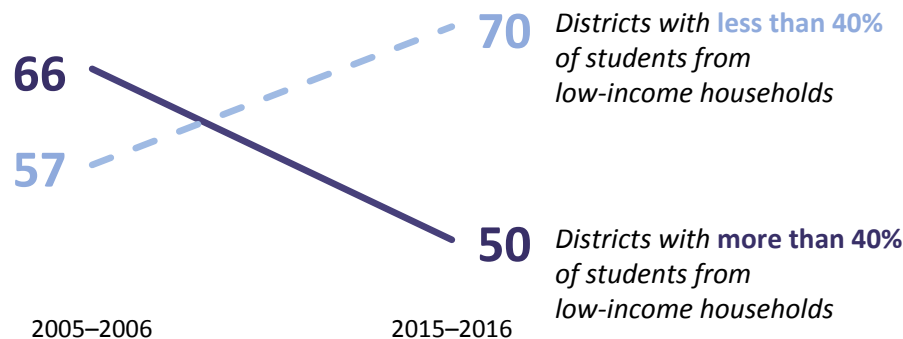
Of even greater concern, the quality library gap is growing rather than shrinking so that equitable access to resources and technology is not available for all students in the state. A comparison among Delaware's school districts shows that the 10 districts in which less than 40 percent of the students are from low-income households have added 13 librarians since the 2005–2006 school year. The nine districts in which more than 40 percent of the students from low-income households have cut 16 librarians since the 2005–2006 school year (Delaware District and School Profiles). Delaware's students from low-income households² are facing reductions in the services needed to improve their reading, writing, and critical thinking skills.

¹ Please see Appendix A: Literature Review for additional information regarding this body of research.

² Low-income, as defined by the Delaware Department of Education, means that a student can qualify for Free and Reduced Price Lunch.

Disparity in Number of Librarian Positions per District

Librarian Positions in Delaware School Districts, comparing 2005–2006 to 2015–2016 school years



In Delaware, just 37 percent of fourth-graders were judged proficient in reading (with an average score of 224 on a 0–500 point scale) and only 31 percent of eighth-graders reached or exceeded the proficient level in reading (scoring 263 out of 500 points).³

Given that the relationship between quality school-library services and student learning and performance has been demonstrated in numerous studies, adopting a holistic approach to improving the quality of Delaware’s school libraries through targeted investments appears to be prudent. The research indicates that such an investment would have a positive impact on all students, but that these investments would benefit at-risk students to an even greater extent.⁴

The following report is intentionally results-oriented. It demonstrates that school libraries have a positive impact on student learning, offers an assessment of the current status of Delaware school libraries, and presents a series of recommendations that, if implemented in a holistic way, would improve student learning and performance on standardized tests in multiple subject areas.

Ten recommendations are offered. They are grouped into four categories:

1. Staffing
2. Content and Access
3. Governance and Infrastructure
4. Assessment and Accountability

³ Test results are from the National Assessment of Educational Progress (NAEP), known as “The Nation’s Report Card”. Data is from 2014–2015.

⁴ Please see Appendix A: Literature Review for additional information regarding this body of research.

Ten Recommendations for Improving School Libraries in Delaware

Staffing

1. Require a school library, a certified librarian, and an appropriate level of support staff in every school.
2. Seek funding for and implement a pilot project in nine schools to determine the impact that quality school libraries have on student learning outcomes.

Content and Access

3. Expand student access to “e-content.”
4. Expand the Delaware Library Consortium to include all school libraries.

Governance and Infrastructure

5. Establish specific governance responsibilities for the coordination and oversight of school libraries.
6. Examine and address systemic issues that inhibit the development of high-quality school library programs.
7. Leverage Every Student Succeeds Act (ESSA) funding to strengthen school libraries.
8. Implement flexible scheduling for school libraries.

Assessment and Accountability

9. Design and implement an ongoing program of data collection, management, and assessment for school libraries.
10. Create a Delaware School-Library Quality Index to facilitate the tracking of student performance and investment in school library services.

Introduction

Over the past two decades, the relationship between the quality of school libraries and student performance has been the focus of dozens of state-level studies, including Delaware. One compendium of “school library impact” studies (Gretes, 2013) identified more than 60 projects in 22 states and one Canadian province that had been conducted in the last 20 years. More recent studies, including those carried out in South Carolina (Lance, Rodney, and Schwarz, 2014) and Washington State (Coker, 2015), take into account the increasing influence of e-content.

School-library impact research has been conducted in geographically large and small states, some with major urban centers and others that are predominantly rural, located in every region of the country. These studies have been conducted over an extended period of time and have examined populations with diverse demographics. A variety of methodologies have been employed in carrying out the investigations and an assortment of different questions of interest related to the impact of school libraries on student learning have been explored.

The relationship between quality school-library service and student performance on standardized reading tests has been researched, as has the correlation between exemplary libraries and graduation rates. Studies have explored the impact of school libraries on critical thinking skills and student performance in science and math. Many of the studies have employed research designs that controlled for factors such as the demographics of the study population, overall per pupil expenditures, percentage of students from low-income households,⁵ and a variety of other characteristics that indicate the degree of economic challenge facing student populations.

Given the diversity of states involved and the variety of methodologies employed, the extent to which these studies arrive at very similar conclusions is remarkable. Simply stated, access to high-quality school library services results in better student performance. The declaration used as the title of this report, ***Quality School Libraries = Higher Student Achievement***, is not a speculative statement. Research affirms this equation.

However, attaining positive student-learning outcomes is not as simple as maintaining an attractive school-library facility or even filling such a facility with up-to-date, relevant materials and state-of-the-art technology. Over and over again, the research demonstrates that the single factor most closely associated with the positive impact of quality school libraries is a full-time, qualified/certified librarian/library media specialist. A 2013 compendium entitled *School Library Impact Studies: A Review of Findings and Guide to Sources* (Gretes, 2013), cites no fewer than 20 different studies that link higher library staffing with higher reading performances for elementary, middle, and high schools. Several additional studies conducted since 2013 confirm the earlier findings (Lance, Schwarz, and Rodney, SC 2014; Coker, WA 2015).

⁵ Low-income, as defined by the Delaware Department of Education, means that a student can qualify for Free and Reduced Price Lunch.

The studies also show that other factors including flexible scheduling, the level of interaction between the librarian and teachers, investment in print and digital resources, and access to technological resources also contribute in statistically significant ways to student achievement. Attaining positive results requires a holistic/systemic approach to providing quality school-library services.

The next section summarizes relevant research supporting the role of quality school libraries in student achievement. Greater detail regarding these and other studies can be found in Appendix A: Literature Review. The research section is followed by a review of factors that impact performance, an assessment of the current condition of Delaware's school libraries, and recommendations for improvements that would lead to higher student achievement.

The Research: What Previous Research Has Shown

Few would challenge the supposition that America's ability to compete in the global economy is closely linked to the nation's ability to educate its children. Yet, most international comparisons place the United States (U.S.) education system in the middle of the pack among developed nations (Program for International Student Assessment [PISA], 2014).

One longitudinal measure of student achievement in the U.S. is the National Assessment of Educational Progress (NAEP). NAEP is a congressionally mandated project administered by the National Center for Education Statistics (NCES), within the U.S. Department of Education and the Institute of Education Sciences (IES). NAEP has assessed what students know and can do in reading, writing, mathematics, and science since 1969. NAEP's findings are reported in a publication referred to as "The Nation's Report Card." The report card is updated biennially; the most recent data was collected during the 2014–15 school year.

The 2015 report shows national achievement levels in reading holding steady compared to 2013 (the last previous assessment) with math achievement levels falling slightly in the same period. Holding steady in reading means that only 36 percent of fourth-graders, 34 percent of eighth-graders, and 37 percent of twelfth-graders were proficient in reading. In Delaware, 37 percent of fourth-graders were judged proficient with an average score of 224 on a 0–500 point scale and 31 percent of eighth-graders reached or exceeded the proficient level scoring 263 out of 500 points.

The National Assessment Governing Board, which oversees NAEP, has suggested that twelfth-grade students scoring 302 or above on the NAEP reading scale are likely to possess the knowledge, skills, and abilities that would make them academically prepared for college. Nationally, only 37 percent of twelfth-graders scored 302 or higher in 2015. Many, if not the majority of, high school graduates are not ready for college or for the workplace without remedial assistance (Petrilli and Finn, 2015).

A meta-analysis of 44 studies carried out by Dr. Jim Lindsay documents the relationship between access to print materials and education outcomes. The analysis showed that access to print materials has the following effects:

- Improves children's reading performance
- Helps children learn the basics of reading
- Causes children to read more and for longer lengths of time
- Produces improved attitudes toward reading and learning among children (Lindsay, 2010)

Both anecdotal and empirical evidence suggests that children in many schools across the nation are seeing a reduction rather than an increase in their access to reading materials (Bridges, 2013). Furthermore, evidence from the Washington State School Library Impact Study (Coker, 2015) suggests "students who are least likely to have access to a quality library are disproportionately more likely to face poverty." In other words, children who are already at higher risk due to socio-economic factors are more likely to experience a deficit in their access to reading materials (Lindsay, 2010; Krashen, 2012).

A study by New York University’s Steinhardt School of Culture, Education, and Human Development documented the existence of “book deserts” in poor neighborhoods and indicated that “access to print resources...early on has both immediate and long-term effects on children’s vocabulary, background knowledge, and comprehension skills” (Neuman & Moland, 2016).

The following overview of research suggests that the improvement of school libraries would be a prudent investment and would generate real gains in student achievement. The examples that follow are intentionally taken from the most recent studies to emphasize the fact that school libraries remain highly relevant in the 21st century.

English Language Arts Performance

A recent statewide study in South Carolina (Lance, Rodney, and Schwarz, 2014) validates the relationship between quality school libraries and test results for specific English Language Arts (ELA) standards. The study found a high correlation between the presence of professional school librarians and test results for three ELA standards—literary text, informational text, and research as well as two writing standards—content and organization. The study determined that the positive link between the presence of professional school librarians and test results “...could not be explained away by demographics such as gender, race/ethnicity, disability, and subsidized or free meals eligibility.”

The South Carolina study affirms the findings of several other studies (including studies in Colorado and Pennsylvania) that also document higher student performance in these areas in libraries with full-time professional staff.

Reading

Multiple studies document the statistically significant relationship between schools with well-staffed libraries and scores on standardized reading tests. In a 2013 compendium entitled *School Library Impact Studies: A Review of Findings and Guide to Sources* (Gretes, 2013), no fewer than 20 different studies are cited that link higher library staffing with higher reading performances for elementary, middle, and high schools (AK 2010; CA 2008; CO 2010; FL 2003; IL 2005; IN 2010; IA 2002; MA 2010; MI 2003; MN 2004; MO 2004; NC 2003; NM; 2002; NY 2010; PA 2000; ON 2006/2009; OR 2001; TX 2001; WI 2006).

A 2012 study in Colorado (Lance & Hofschire, 2012) demonstrates that gains in reading scores are highest when there is a full-time “endorsed (certified) librarian” at the building level. The study states that “Research findings on school librarians and their association with students’ (reading) 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” (Lance & Hofschire, 2012).

Furthermore, the research demonstrates that the inverse is also true. Lance and Hofschire documented the impact of librarian layoffs on fourth-grade reading scores between 2004 and 2009. “Fewer librarians translated to lower performance—or a slower rise in scores—on standardized

tests.” The study also found that “19 of the 26 states that gained librarians saw an average 2.2 percent rise in their National Assessment of Education Progress (NAEP) fourth-grade reading scores” (Lance & Hofschire, 2012).

Students at risk tended to be affected more positively by the addition of school librarians than the general student population and these at-risk populations suffered greater losses when librarians were eliminated (Lance & Hofschire, 2012).

Writing

In a recent South Carolina study (Lance, Schwarz, and Rodney, 2014), all students, both male and female, were more likely to show strengths and less likely to show weaknesses on the Palmetto Assessment of State Standards (PASS) Writing standards—overall and on Content and Organization—if their school libraries were staffed by at least one full-time librarian and at least one full-time or part-time assistant than if their libraries were staffed otherwise. All students were 2 percent less likely to show weaknesses on the PASS writing standards if a qualified full-time librarian was on staff. All students were 2.1 percent more likely to demonstrate strengths on the Content and Organization tests if a qualified full-time librarian was present in their school.

A study conducted in Pennsylvania in 2012 entitled *How Pennsylvania School Libraries Pay Off: Investments in Student Achievement and Academic Standards* (Lance & Schwarz) found that “the impact of school libraries is more pronounced proportionately for writing than reading scores.” Students with access to quality libraries (defined by measures that included a certified librarian, availability of support staff, expenditures of at least \$11 per student per year for new resources, collections of at least 12,000 volumes, up-to-date technology, and flexible scheduling), were two-to-five-times more likely to score “advanced” on the Pennsylvania System of School Assessment (PSSA) reading and writing tests than students who did not have access to quality libraries.

Other Areas of Increased Performance

Gains in student performance are not limited to ELA. Test results that assess critical thinking skill areas related to ELA such as research and information literacy are also positively impacted by the availability of quality school-library services. Although the correlation between quality school libraries and performance in math and science has not been studied as frequently, several studies show gains that cannot be explained by other factors (Dow, Lakin, & Court, 2012). As identified by the studies below, research skills, information literacy skills, and even graduation rates appear to be impacted by the presence of high-quality school libraries.

Research Skills

The South Carolina study (Lance, Schwarz, and Rodney, 2014) reveals that the presence of at least one full-time librarian and a full or part-time assistant made a significant difference in “exemplary” performance in the research component of the Palmetto Assessment of State Standards (PASS). The percentage of students scoring at exemplary levels was two to three percent higher in schools with

a full complement of library staffing. This gap persisted across many categories of students including boys and girls, Hispanic students, and limited English language students.

Math & Science

Research conducted in Kansas (Dow, Lakin, & Court, 2012) found that students in schools that maintained higher and more stable library media specialist staffing had higher proficiency rates as reported in Kansas Annual Yearly Progress data. The higher proficiency rates were not limited to reading and writing; scores were higher in mathematics, science, and history/government as well. In fact, the proficiency difference between students in schools with library media specialists and without library media specialists was greatest in mathematics. Furthermore, this proficiency difference persisted across the grade levels (elementary, middle, and high school).

Information Literacy Skills

Research exploring the correlation between school librarians and the development of information literacy skills (Schultz-Jones & Ledbetter, 2009, 2010) concluded that school librarians “can develop and nurture an optimal learning environment that makes a positive and measurable contribution to the educational process.” These studies stress the importance of librarian/teacher interaction and partnerships in facilitating student learning. Another compendium of school-library impact studies prepared at Mansfield University (Kachel, 2013) cites studies linking librarian/teacher interaction and gains in student learning in the areas of information literacy and technology skills (Smith, 2006; Klinger, 2009).

Graduation Rates

The Washington State School Library Impact Study entitled *Certified Teacher Librarians, Library Quality and Student Achievement in Washington State Public Schools* (Coker, 2015) developed a measurement tool to assess student performance in relation to a holistic assessment of library quality. The study applied a Library Quality Scale (LQS) to rank libraries into four categories (low library quality, fair (-) library quality, fair (+) library quality, and high library quality) and then examined student performance in relation to LQS rankings. The LQS criteria included nine items that reflected staffing levels and hours of access, print and electronic resources, access to up-to-date technology, and scheduling.

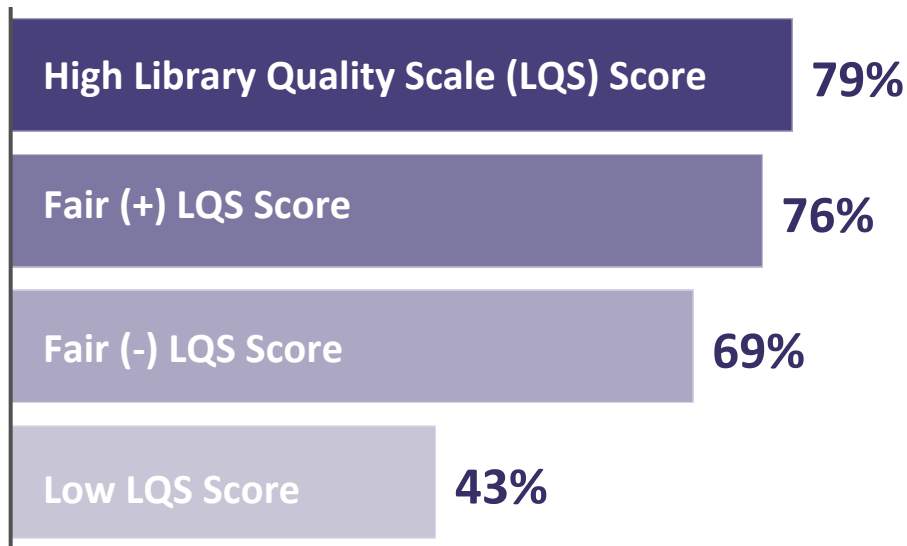
Using the LQS rankings, the Coker study looked at five-year graduation rates in schools in three categories:

- Less than 30% of students eligible for Free or Reduced Price Lunch (FRPL)
- Between 30% and 50% of students eligible for FRPL
- 50% or higher students eligible for FRPL

While the difference in graduation rates in low library quality schools and high library schools serving the less than 30 percent FRPL was significant (11%), the gap in graduation rates in low library quality schools and high library schools serving the 50 percent or higher FRPL was an

astounding 36 percent (43 percent in schools with low library quality and 79 percent in schools with high library quality). Again, quality school libraries appear to have the greatest impact among students who face a variety of socio-economic challenges.

Figure 1: Five-Year Graduation Rates for Schools with 50% or Higher Qualified for Free or Reduced Price Lunch



The Requisites: Factors That Impact Performance

As was previously noted, the extent to which school-library impact studies arrive at very similar conclusions is remarkable. The same factors are identified over and over again as being correlated with student success, and while there are some variations in findings, it is the similarity rather than the variance that is striking. Research indicated the following characteristics make a difference in student learning:

- A full-time certified/qualified librarian at the building level⁶
- Adequate support staff to enable the librarian to perform professional duties
- Adequate expenditure for new resources to ensure student access to recent, relevant content⁷
- High level of collaboration between librarians and teachers and librarians and students
- Flexible scheduling that enables the librarian to interact with teachers and students
- Access to up-to-date technological infrastructure and online resources
- Access to professional development and networking opportunities for library staff

While the research demonstrates that professional staffing is clearly the most important of the factors in terms of student performance, the school libraries that make the most difference in student learning are those in which all of the factors come together in a holistic way (Coker, 2015). In acknowledgement of this fact, this Master Plan recommends a holistic approach to the development of quality libraries and creates a system for quantifying “quality libraries” that will facilitate ongoing assessment of school-library impacts.

The next section presents deficiencies that currently exist in Delaware’s school libraries as well as some troubling trends that diminish the effectiveness of school libraries and librarians. The recommendations section of the report provides a way forward that, if implemented, will generate positive outcomes.

⁶ School librarian certification requirements are codified in Title 14, Chapter 1500, Section 1580 *School Library Media Specialist* of the Delaware Administrative Code. See Appendix.

⁷ What is deemed an adequate dollar amount to make a positive difference ranges from \$11 per student to over \$15 per student.

The Reality: Findings From the Delaware Study

A study of Delaware's school libraries conducted by Dr. Ross J. Todd in 2004 was generally optimistic. Todd identified a number of challenges facing school libraries in the First State but indicated that "Delaware has the potential to be identified nationally as one of the first states to achieve high quality school library services and programs and to reach state-based and nationally determined standards." He cited deficiencies that he called "shortcomings in the provision of infrastructure—resources, full-time staffing, as well as instructional opportunities to work with classroom teachers." Unfortunately, it appears that the same shortcomings still exist in 2016 and they, in fact, have become even more pronounced.

The positive outcomes envisioned by Todd have not materialized, not because the advice in the report was flawed, but rather, because the recommendations from the report were never implemented.

Todd outlined a set of characteristics that parallel virtually every major statewide study of school libraries that has been carried out since the year 2000. Among the characteristics identified by Todd as contributing to student learning outcomes were:

- A state-certified, full-time, library media specialist in the building;
- The availability of para-professional staff who undertake routine administrative tasks and free the library media specialist to undertake instructional initiatives and reading literacy initiatives;
- A library program that is based on flexible scheduling so that library media specialists and classroom teachers can engage in collaborative planning and delivery of information literacy instruction;
- A school library that meets resource recommendations of 15 to 20 books per child;
- A budget allocation of \$12 to \$15 per-student per-year to ensure currency and vitality of the information base;
- A strong, networked information-technology infrastructure that facilitates access to and use of information resources in and out of the school.

A number of methods were employed in carrying out this study to revisit the status of Delaware's school libraries in 2015–16. These efforts included:

- A web-based survey directed to all school-library staff including certified librarians, other certified teachers acting as school librarians, and paraprofessionals working in (and sometimes managing) school libraries;
- Focus groups with school-library/media-center personnel held in locations throughout the state;
- Focus groups with school principals; and
- Personal interviews with individuals including librarians, principals, superintendents, and others with special knowledge of specific programs.

Following is an overview of the findings of these information-gathering efforts. Greater detail can be found in the appendices to this report.

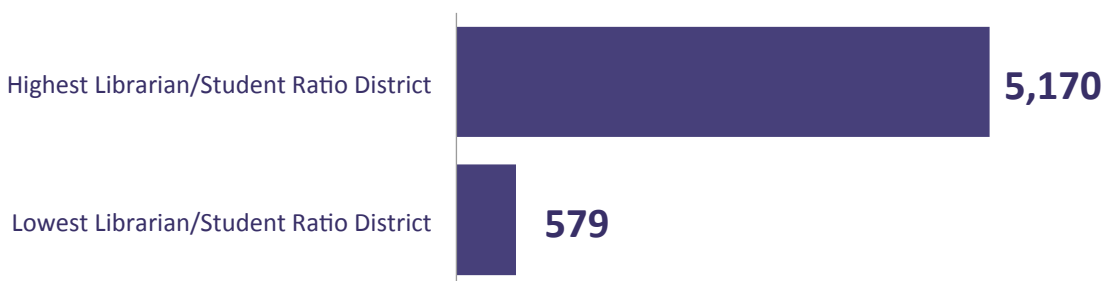
Professional Library Staff

The presence of a full-time, well-qualified/certified librarian at the building level is the factor most closely correlated with student success in virtually all of the school-library impact studies. It is therefore vitally important to consider how Delaware's schools are faring in this critical area.

When Ross Todd's study was released in 2005, the total enrollment in Delaware's public, non-charter schools was 115,816 students. A decade later, the student population had grown to 123,127, an increase of 6.3%. In 2005, Delaware school districts reported that they employed a total of 123 librarians. By the 2015–16 school year, that number had dropped to 120. At first glance, this drop may seem relatively insignificant; however, a closer examination reveals some very troubling trends. The statewide picture masks a much bleaker situation that adversely affects students in some districts.

In 2005–2006, the statewide ratio of librarians to students was one librarian for every 942 students. By 2015–16, the ratio had grown to one librarian for every 1,026 students. Again, this disparity seems relatively small. It is not until we begin to examine numbers at the district level that considerable inequity is revealed. In 2005–2006, the district with the best librarian/student ratio had one librarian for every 535 students. In 2005–2006, the district with the poorest librarian/student ratio had one librarian for every 2,131 students. In 2015–16, the district with the best librarian/student ratio had one librarian for every 579 students (this district added four librarian positions between the 2014–15 and 2015–16 school years). The lowest ratio for the 2015–16 school year was one librarian for every 5,170 students. It would seem clear that there is a significant disparity between the school-library services received by a student in a district with one librarian for every 579 students and the services received by a student in a district with one librarian for every 5,170 students.

Figure 2: Disparity in Delaware Public School Districts in the Ratio of Librarians to Students

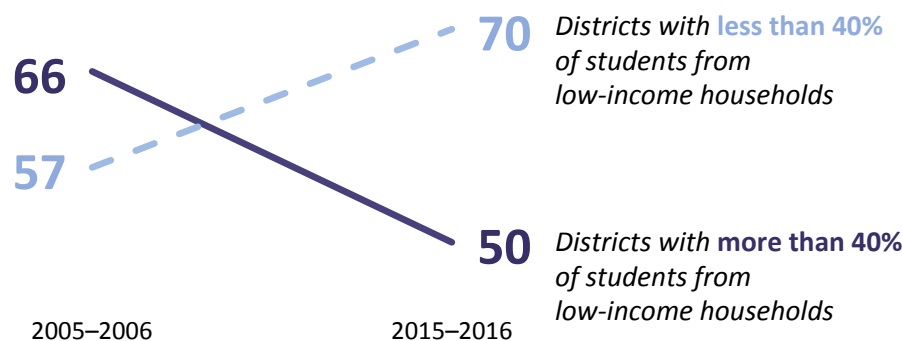


Even more alarming is the fact that Delaware's school libraries appear to be headed in an increasingly dire direction in regard to the number of schools with full-time, certified librarians. A comparison among Delaware's school districts shows that the ten districts in which less than 40

percent of the students are from low-income households have added 13 librarians since the 2005–2006 school year. The nine districts in which more than 40 percent of the students are from low-income households have cut 16 librarians since the 2005–2006 school year. It’s worth noting that the district with the highest percentage of students from low-income households in the state, added four librarian positions between 2014–15 and 2015–16. However, the overall trend indicates that Delaware’s at-risk students who could benefit the most from quality school libraries are instead facing reductions in services likely to improve their performance in reading, writing, and critical thinking.

Figure 3: Disparity in Number of Librarian Positions per District

**Librarian Positions in Delaware School Districts,
comparing 2005–2006 to 2015–2016 school years**



Another concern relates to the qualifications of library staff. Although the *Delaware District and School Profiles* report 120 librarians, a closer examination reveals that not all of the individuals filling these positions are certified librarians. According to records from the Delaware Association of School Librarians, approximately 110 of the librarians are either currently certified or are qualified for certification. In most other instances, para-professionals operate school libraries and are reported in the districts statistics as librarians (2015). This is simply one of many areas in which a lack of centralized data-collection about school libraries hinders quality analysis.

An additional troubling trend is an apparent gradual erosion of the time librarians are able to spend carrying out their professional duties. Input from the web-based survey, librarian focus groups, and librarian interviews indicates that many, if not most Delaware school librarians are severely limited in the amount of time they can spend working in a professional capacity with students and teachers. Of the 64 librarians responding to the web-survey, 60.9 percent indicated that they have other instructional and/or staffing responsibilities beyond those directly associated with their job duties in the library/media center. These duties range from serving as the school test coordinator or a special education teacher to duties more closely aligned with the library such as acting as the building technologist and teaching research-skills classes.

Adding to this erosion is a reported decline in the number of support staff working in Delaware's school libraries. Only 10 of the 68 librarians responding said that any other paid staff worked in their libraries. Of these, four libraries had only part-time support. Consequently, many librarians reported spending a significant portion of their time on clerical tasks ranging from checking materials in and out, re-shelving books, and processing materials (attaching book covers, labels, etc.). Time spent carrying out clerical tasks directly impacts the amount of collaboration with teachers that research demonstrates has a positive impact on student learning.⁸

Several librarians who participated in focus groups raised a related issue concerning professional learning communities (PLCs). Although librarians are uniquely positioned to add significantly to PLCs as cross-disciplinary resources, librarians report that their role is often relegated to covering classes while teachers participate in PLC meetings. A rethinking of the role that librarians might play in PLCs would very likely yield positive results (Hughes-Hassel, Brasfield, and Dupree, 2012).

Librarians participating in focus groups and in interviews also raised concern about unit counts. They expressed the opinion that the inclusion of librarians in the general unit count pits librarians against other valued and needed staff. The available research builds a strong case for a model that mandates a level of library staffing that reflects the size of the student population rather than placing librarians in competition with other educators and support staff.⁹

Finally, information gathered in focus groups, interviews, and in sessions with the Delaware School Libraries Council underscores the importance of ongoing staff development for librarians. The web-based survey documents the fact that most school librarians in Delaware are working in isolation from other library professionals. Delaware's certification program for librarians should be reviewed with an eye toward strengthening the professional development component.

In short, professional librarian positions are being cut disproportionately in districts in which students could benefit most from their services. Furthermore, the effectiveness of many of the librarians already in place has been diminished because of a lack of support staff and by the encroachment of many other duties that reduce the amount of time they are able to spend interacting with students and teachers.

Access to Resources

Access to up-to-date, relevant resources produces numerous positive outcomes (Lindsay, 2010) including:

- Improving children's reading performance
- Helping children learn the basics of reading
- Causing children to read more and for longer lengths of time
- Producing improved attitudes toward reading and learning

⁸ Please see Appendix A: Literature Review for additional information regarding this body of research.

⁹ Please see Appendix A: Literature Review for additional information regarding this body of research.

However, it appears that the books and other learning resources offered by Delaware’s school libraries have declined since the Todd study was conducted more than a decade ago. Todd reported an average collection size of 11,500 items and a median budget allocation for new materials at “below \$6,000” per school. The web-survey conducted in 2015 identified the mean expenditures for new materials (purchased with tax funds) as \$4,688 and that the median budget was \$3,000—half of the estimated amount reported in the Todd study.

Although the survey found that average school collections have grown slightly (a median of 12,450 items), on average, only 460 new items were being added to each school’s collection per year (median was even lower at 300). This is a very clear indication that Delaware’s school-library collections are outdated. At a replacement rate of 460 new items a year (3.7% of the collection per year), it would take roughly 27 years for the entire collection to turn over.

In 2012–13, the Delaware School Libraries Council worked with Follett, the current school-library catalog vendor, to conduct an analysis of print collections. The results of this analysis appeared in the Delaware School Libraries Council Annual Report for 2013. Follett reported that the average copyright date of fiction titles in Delaware’s school-library collections was 1994 and that the average imprint date of non-fiction materials was 1993. Nearly 90 percent (89.97%) of the materials in Science Technology, Engineering, and Math (STEM) categories (Dewey 500s [Science] and Dewey 600s [Applied Sciences]) were more than 5 years old.

The Todd study recommended an expenditure of \$12 to \$15 per student per year for the purchase on new resources. However, this recommendation was made more than ten years ago and does not account for inflation that has occurred over the past decade. Currently, it is impossible to accurately report total expenditures for new library resources. For the most part, decisions regarding library materials budgets are being made at the building rather than at the district level and no centralized system of reporting these expenditures is readily available (Focus Groups, 2015). However, web-survey results suggest that the total expenditure for new materials is in the range of \$800,000 to \$900,000. This would translate into between \$6.50 to \$7.50 per student.

The South Carolina study (Lance, Rodney, and Schwarz, 2014) indicated that expenditures of \$13.33 or more per student was correlated with positive outcomes in terms of student performance. An earlier study in Pennsylvania (Lance and Schwarz, 2012) found that expenditures over \$11.00 per student made a difference in student performance. While it is difficult to define a precise expenditure recommendation, there is no question that the amount that would contribute to desired results in student learning is considerably more, and probably closer to double, what is being spent per student at the current time.

One advantage that students in Delaware have that isn’t afforded to all children in the nation is access to high-quality online databases. UDLib/SEARCH is a program that works to deliver equitable access to information resources. The continuation of this program is essential. While online databases are an extremely valuable research tool, they are not a replacement for book-length works. Building on this model by expanding it to include more curriculum-based e-content offers an opportunity to increase access to up-to-date, relevant content in a way that ensures equity as well as quality.

The current status of resource sharing between and among schools has improved to a modest extent over the course of the past decade. Dr. Todd reported that 40 percent of school-library catalogs were searchable via the Internet. While that percentage has doubled (80.9 percent of survey participants indicated that their library holdings were available outside the school building), the overall level of resource sharing among schools is still very low. This is due, at least in part, to a lack of a reasonable quantity of up-to-date materials that are in high demand (Focus Groups, 2015). However, the lack of a networked online resource for finding and reserving materials also contributes to this situation. A pilot program is underway to include a limited number of school libraries in the Delaware Library Catalog. This may serve as a model for the sharing of resources not only between and among school libraries but between and among school and public libraries as well.

Coordination and Data Collection

Delaware school libraries have suffered a fate common to many other states in regard to state level coordination. At one time, many state education departments, including Delaware, had individuals (and often whole units) that worked directly with school libraries to support and coordinate their efforts. Over time many of these positions disappeared. Making matters even worse, having a district-level school-library coordinator used to be common, but now these positions have nearly disappeared. In short, both state- and district-level personnel supporting school-library services have evaporated. School librarians reported that they often feel as if they are operating in a vacuum. Professional development and the building of professional networks have largely been the result of personal initiative and voluntary activities as opposed to being efforts supported by either the State or by school districts.

The “reconstitution” of the Delaware School Libraries Council has been one step in the right direction in that a formal governmental body now exists that has the mission of “establishing an exemplary school library program.” In addition to spearheading the current master plan process, the council has undertaken some data collection and has served as a point of contact and as an advocate for school libraries with school districts, school boards, the legislature, and the public. It is critical that the Council be reauthorized through Executive Order under the next governor’s administration. Unfortunately, no paid staff is assigned to the council and its efforts have largely been undertaken as a labor of love by individuals who care about school libraries and who are aware of the difference that they can make. However, without formal staffing support, the council’s abilities to affect change will be extremely limited.

Furthermore, the work that needs to be done is considerable. In addition to the support and coordination of school-library programs from the state level, programs to collect and report school-library statistics have all but disappeared. In the past, some basic information regarding school libraries was gathered through the National Center for Educational Statistics (NCES) Schools and Staffing Survey (SASS). While incomplete in its scope, SASS at least provided some baseline information that could be used for comparative and research analysis purposes. However, SASS has now been replaced by the National Teacher and Principal Survey (NTPS). Unfortunately, the NTPS survey captures little more than verification of whether or not an individual school has a library.

This severely limits the ability of schools, school districts, and state education agencies to assess the impact of investments in school libraries. In short, the basic tools needed to assess the impact of school-library programs on student performance are largely lacking.

The Recommendations

Introduction

The declaration used as the title of this report, Quality School Libraries = Higher Student Achievement, is not a speculative statement. Research affirms this equation. Considerable evidence suggests that Delaware will attain measurable gains in student performance if strategic investments are made in improving the quality of the First State's school libraries. The following recommendations are intended to chart a course that will enable the state to realize these gains.

It should be noted that several of the recommendations are not new, nor are they revolutionary. The findings of this Master Plan and its recommendations are consistent with those made in a study by Dr. Ross Todd when he examined Delaware's school libraries over a decade ago. The recommendations are also consistent with those made in dozens of other statewide studies conducted across the nation since the year 2000. The fact that potential gains outlined in the Todd report (and in many others) have not materialized does not reflect poorly on the quality of the recommendations; rather, progress has been impeded in Delaware (and many other states) because good recommendations were never acted upon.

The recommendations in this report are intentionally results-oriented. The recommendations propose making holistic changes that together will yield positive outcomes. The recommendations have been organized into four separate categories. They are:

- Staffing
- Content and access
- Governance and infrastructure
- Assessment and accountability

Research shows that different components of library services contribute to student success to varying degrees and that they impact learners in different ways.¹⁰ For example, overall, full-time professional staffing at the school building level has the greatest impact on performance on standardized tests that assess reading, writing, and research skills. However, simple access to reading materials is also crucial. Several studies (Pribesh, 2011; Krashen, 2012) document a relationship between poor reading test scores among children in poverty and lack of access to books in their homes and communities. This issue was recently underscored in the "book desert" study that looked at access to print resources in low-income neighborhoods (Neuman & Moland, 2016).

A high correlation has also been found between student achievement and factors such as the nature and quality of interaction between librarians, flexible versus fixed schedules and overall

¹⁰ Please see Appendix A: Literature Review for additional information regarding this body of research.

expenditures on library services.¹¹ An approach that improves the quality of school libraries in multiple ways is most likely to generate positive results in terms of student learning and performance.

A brief overview of the recommendations is presented below followed by additional details regarding each of the proposed actions.

Staffing

Research demonstrates that the presence of a certified professional librarian with an appropriate level of support staffing at the building level is the component of library service that is most highly correlated with student performance.¹² Consequently, two recommendations are directed toward achieving the goal of having a fully staffed library in each public elementary, middle, and high school building in the state. The first recommendation involves the development of legislation that codifies the requirement for libraries in each school and designates school librarians and accompanying paraprofessionals as a distinct category within the state's unit count appropriation model.

State funding for this initiative would be approximately 70 percent of the total needed to implement the effort. Fully implementing the program would require local school district support of approximately 30 percent. Recognizing that fully reaching this goal will likely take a period of time, the second recommendation calls for a privately-funded "proof-of-concept" pilot project involving nine schools (an elementary school, a middle school, and a high school in each county). The pilot project would support the improvement of nine libraries in four critical areas (professional staffing, support staffing, acquisition of new materials, and improved access to existing resources) that research demonstrates produces improved learning outcomes for students. The pilot would enable the participating schools to achieve a high level on a school-library quality index that is built around research findings. Student performance on specific standardized tests at the appropriate grade levels would then be used to demonstrate and document the impact of quality school libraries.

Recommendation 1: Require a School Library, a Certified Librarian, and an Appropriate Level of Support Staff in Every School

Delaware should implement legislation that codifies the requirement for a school library in each school and provides a certified library media specialist and appropriate level of support staff in every elementary, middle, and high school. This legislation would be similar to House Bill No. 152, which was introduced in the 148th General Assembly, but would "scale" the requirement for certified library media staff and would add support staff based on an individual school's enrollment level. The legislation would designate school librarians, and appropriate library support staff, as a distinct category within the State's unit count appropriation model to ensure that each school will receive sufficient State funding to hire the number of school librarians and support staff recommended in the School-Library Quality Index (see Recommendation # 10).

¹¹ Please see Appendix A: Literature Review for additional information regarding this body of research.

¹² Please see Appendix A: Literature Review for additional information regarding this body of research.

Recommendation 2: Seek Funding for and Implement a Pilot Project in Nine Schools to Determine the Impact that Quality School Libraries Have on Student Learning Outcomes

Delaware should seek corporate/foundation/philanthropic funding for a pilot project designed to serve as a proof-of-concept of the correlation between quality school libraries and student performance. The pilot should be implemented over a five-year period in nine schools (one elementary school, one middle school, and one high school in each county.) Participant schools would be funded for five years at a level that would cover an appropriate staffing complement, funding for library resources at the recommended level of \$15 per student and costs associated with participation of the library in the Delaware Library Catalog. These pilot libraries will be considered Quality School Libraries when they have achieved a score of at least 90 points on the School-Library Quality Index.

Content and Access

Several of the studies that explore the correlation of quality libraries and student performance have found statistically significant relationships between the level of access to reading resources and student performance (Krashen, 2004, 2012; Lindsay, 2010). That there is a relationship between access to reading materials and the ability of children to read would seem intuitive.

Annual expenditures for new resources (print, non-print media, and online resources) are a strong indicator of access to resources that actually will be read. Outdated titles get little use (Baumbach and Miller, 2006). The relationship between expenditures for new materials and student learning is not quite as strong as the professional librarian/student learning correlation, nevertheless, it is statistically significant and represents a key, measurable component in quality library service (Kachel, 2013).

Unfortunately, there is a tremendous disparity in the quantity and quality of resources available to Delaware's students. Students in schools with no libraries or with libraries stocked with outdated resources (indicated by the fact that they spend little or nothing for new materials or content) are at a clear disadvantage when compared to children in schools that invest in new resources on an ongoing basis.

Two recommendations seek to remedy this disparity. The first calls for the expansion of the UDLib/SEARCH program and Delaware Division of Libraries' e-book program to increase the access to e-books. E-books are an excellent investment. Data from the Delaware Division of Libraries' e-book program (2015) indicates that 41 percent of their e-books are "checked out" at any given time compared to a rate of about 10 percent for typical print collections.

The second recommendation recognizes that Delaware's taxpayers are already investing in a wide variety of library materials in school and public libraries. By including school libraries in the Delaware Library Catalog (which already includes the holdings of all public libraries and some academic collections), all children and adults in Delaware would gain improved access to a wealth of resources. Participation in the shared catalog would also facilitate the sharing of materials

between schools in the same district, among districts in the state and between schools and public libraries. While it would be possible to marginally improve resource sharing through the creation of a shared Follett “Destiny” system (most schools in Delaware currently use local versions of this system), the DLC solution offers greater possibilities for expansion as a primary information source in addition to being a finding and resource sharing tool. Participation in the DLC would also address the serious issues that exist in regard to equity of access to resources.

Recommendation 3: Expand Student Access to “E-Content”

Delaware should expand on its successful group licensing efforts represented by UDLib/SEARCH program through the University of Delaware’s Morris Library and e-book licensing on behalf of all Delaware residents facilitated through the Delaware Division of Libraries to increase student access to additional online and downloadable e-content, especially e-books. The UDLib/SEARCH model already ensures equitable student access to an outstanding set of research and study tools. Expanding the program by providing statewide funding for curriculum-related e-books would address a serious disparity in the quality and quantity of other educational resources that currently exists. The program would be coordinated and administered as an extension of UDLib/Search. Expanding the Delaware Division of Libraries’ e-book program to include more titles for children would provide enhanced access to general reading materials for all State residents including students and teachers.

Recommendation 4: Expand the Delaware Library Consortium to Include all School Libraries

The Delaware Library Catalog, provided through the Delaware Library Consortium, offers residents of the First State single-search access to the holdings of every public library in the state. The holdings of all Delaware school libraries should also be reflected in the Delaware Library Catalog. This would result in more efficient student access to valuable library and information resources as well as the more efficient use of the state and local tax dollars that are currently spent to purchase library materials. Students would likely make greater use of public library materials as well because a single search would enable them to find relevant resources wherever they exist in the state. Finally, the inclusion of school libraries in the Delaware Library Catalog would also strengthen the concept of a lifelong learning continuum involving schools and public libraries and move Delaware toward the “seamless information landscape” envisioned in the 2004 Todd study.

Governance and Infrastructure

The effectiveness of existing school libraries has been hampered in a number of different ways. Most school librarians currently operate in a vacuum with little coordinated direction and with limited opportunities to innovate and collaborate within their schools, within their districts and within the state. School districts are largely unaware of resources held by other neighboring districts and there is a lack of an effective resources sharing system. Creating a governance framework and a resource sharing infrastructure would enable school libraries to maximize the value of staff and other educational library resources that are purchased with taxpayer dollars by expanding the potential audience for every item purchased.

Because there are a number of distinct factors that contribute to this situation, a variety of recommendations are offered. Recommendation 4 (that the Delaware Library Consortium (DLC) be expanded to include all school libraries) is closely tied to the Governance and Infrastructure recommendations. In fact, a robust shared integrated library system is part of the overall infrastructure that is needed. While it would be possible to marginally improve resource sharing through the creation of a shared Follett “Destiny” system, the DLC solution offers greater possibilities for expansion as a primary information source in addition to being a finding and resource sharing tool.

However, creating a linked system of school libraries will require more coordination than is currently in place. It would require the creation of positions within the Delaware Department of Education and Division of Libraries to coordinate, support, and oversee school libraries. The management of school libraries and hiring decisions regarding library staff would still remain at the local and school district levels. The point of increased coordination is not control, rather, it is designed to achieve greater efficiency and effectiveness of limited resources. Statewide coordination would provide professional support to school librarians and would offer advice to local administrators when requested.

A second Governance and Infrastructure recommendation calls for the review of administrative rules and structural mechanisms that tend to make school libraries targets for cuts and reductions to create a new model that provides incentives rather than disincentives to districts to support quality libraries.

A third recommendation identifies changes in a federal program (the transition from the Elementary and Secondary School Act [ESEA] to the Every Student Succeeds Act of 2015 [ESSA]) that may provide opportunities to use federal funds to improve school-library services. The final recommendation in this category urges the adoption of a flexible scheduling model in schools. This recommendation stems from the fact that research demonstrates that librarian/teacher collaboration is vastly improved under this model. Collaboration between librarians and teachers in activities ranging from participation in professional learning communities to co-teaching has been identified as an important factor in the link between quality libraries and student learning (Lance, Rodney, and Schwarz, 2010).

Recommendation 5: Establish Specific Governance Responsibilities for the Coordination and Oversight of School Libraries

Specific responsibilities for the coordination of oversight of Delaware’s school libraries should be codified and implemented. To ensure coordination and cooperation between school and public libraries in the further development of a continuum of lifelong learning, some of these responsibilities should be given to the Delaware Department of Education, while other responsibilities should reside in the Division of Libraries.

Recommendation 6: Examine and Address Systemic Issues that Inhibit the Development of High-Quality School-Library Programs

The importance of having a high-quality school library staffed by a certified librarian in every school cannot be overstated. Adequate staffing, sufficient quality resources, and a supportive administrative culture are all critical components that allow school libraries to serve as a catalyst for improving learning outcomes for all students regardless of socioeconomic status. Unfortunately, several issues such as the absence of a designated funding source for staff and materials, insufficient mechanisms for the evaluation of librarians, and a lack of understanding regarding the impact that high-quality school-library programs can have on students hinder their development and performance. These issues must be examined in further detail, and solutions should be developed to address them.

Recommendation 7: Leverage Every Student Succeeds Act (ESSA) Funding to Strengthen School Libraries

Delaware should take advantage of the Every Student Succeeds Act of 2015 to strengthen its school libraries in specific, targeted ways. The reauthorization of the Elementary and Secondary Education Act (ESEA) as the Every Student Succeeds Act of 2015 places a greater emphasis on school libraries and provides opportunities for leveraging federal funds to enhance student learning through the improvement of Delaware's school libraries.

Recommendation 8: Implement Flexible Scheduling for School Libraries

Delaware school librarians should work with their school and district administrations toward the implementation of a flexible scheduling model for libraries in all schools. Research indicates that the quality of interaction between librarians and teachers is greatly enhanced when library services are operating within a flexible scheduling environment. Schools should be encouraged to implement flexible scheduling or at least to establish a hybrid of fixed/flexible scheduling.

Assessment and Accountability

The discontinuation of the collection of statistical data on school libraries through the Federal Schools and Staffing Survey (SASS) leaves Delaware and the rest of the nation with a dearth of basic reliable data about school libraries. This unfortunate situation limits the degree to which Delaware can track the impact of its school libraries. The lack of designated staff in the Department of Education with responsibilities for school libraries makes the situation even worse since the State is not currently in the position to fill this information/statistics gathering and analysis gap. Furthermore, the research demonstrates that gains in student performance require more than simply the existence of a school library. Quality school libraries make a difference. The research clearly identifies the factors that, together, constitute quality.¹³

Two recommendations revolve around assessment and accountability. The first calls for the collection of a basic set of data from school libraries on an ongoing basis. The second

¹³ Please see Appendix A: Literature Review for additional information regarding this body of research.

recommendation creates an effective mechanism that would use the data that are collected to evaluate libraries based on a school-library quality index. School-library quality index ratings and standardized test scores can then be applied to assess progress in student learning in relation to library quality.

Recommendation 9: Design and implement an ongoing program of data collection, management, and assessment for school libraries

Delaware should design and implement its own ongoing assessment/data collection/data management effort to document the gains resulting from additional investment in the state's school libraries. The dearth of quality comparative data regarding school libraries makes assessment difficult, and in some instances, impossible. Data collection should be limited to a small set of essential data with specific application to measuring the impact of quality library services on student performance.

Recommendation 10: Create a Delaware School-Library Quality Index to Facilitate the Tracking of Student Performance and Investment in School-Library Services

Delaware should implement a "School-Library Quality Index" that uses the data collected as the result of Recommendation 9. This index would create a rating of school-library services that would be used in concert with standardized testing results to measure the impact that specific, targeted investments in school libraries have on student performance.

Following is a more in-depth look at each of the recommendations.

Staffing

Recommendation 1: Require a School Library, a Certified Librarian, and an Appropriate Level of Support Staff in Every School

Delaware should implement legislation that codifies the requirement for a school library in each school and provides a certified library media specialist and appropriate level of support staff in every elementary, middle, and high school. This legislation would be similar to House Bill No. 152, which was introduced in the 148th General Assembly, but would "scale" the requirement for certified library media staff and would add support staff based on an individual school's enrollment level. The legislation would designate school librarians, and appropriate library support staff, as a distinct category within the State's unit count appropriation model to ensure that each school will receive sufficient State funding to hire the number of school librarians and support staff recommended in the School-Library Quality Index (see Recommendation # 10).

New legislation should be drafted that encompasses the staffing recommendations outlined in the School-Library Quality Index. This legislation would differ from House Bill No. 152, introduced in the 148th General Assembly, in that it would require each school building to have a library and would call for both a specific number of certified library media specialists and paraprofessional support staff based on the size of the student enrollment in each school. It would integrate school librarians, and accompanying paraprofessionals, as a distinct group within the State's unit-count appropriation

model (Title 14, Chapter 17, State Appropriations). Doing so ensures the development of a dedicated funding source from the State to support the salary and benefits of school librarians and accompanying paraprofessionals. The recommended number of staff reflects research that demonstrates a strong correlation between school library staffing and student performance.¹⁴

State funding for this initiative would be approximately 70 percent of the total needed to implement the effort. Fully implementing the program would require local school district support of approximately 30 percent.

Following are the recommended levels for certified library media specialists and support staff:

Table 1: Certified Library Media Specialist

Enrollment	Certified Library Media Specialist Target
0 – 299	.5 Full-Time Equivalent
300 – 999	1.0 Full-Time Equivalent
1,000 – 1,599	1.5 Full-Time Equivalent
1,600 or higher	2.0 Full-Time Equivalent

Table 2: Library Support Staff/Para-Professional

Enrollment	Library Support Staff/Para-professional Target
0 – 299	.0 Full-Time Equivalent
300 – 999	.5 Full-Time Equivalent
1,000 – 1,599	1.0 Full-Time Equivalent
1,600 or higher	2.0 Full-Time Equivalent

Ideally, the proposed legislation, or additional companion legislation, would also address the issue of per-pupil expenditures for new library resources by establishing incentives to reach specific targets. Target levels for this element should also be based on the recommendations found in the School-Library Quality Index. An expenditure target of \$15 per student (adjusted annually to reflect inflation) is the ultimate goal.

Recommendation 2: Seek Funding for and Implement a Pilot Project in Nine Schools to Determine the Impact that Quality School Libraries Have on Student Learning Outcomes

Delaware should seek corporate/foundation/philanthropic funding for a pilot project designed to serve as a proof-of-concept of the correlation between quality school libraries and student performance. The pilot should be implemented over a five-year period in nine schools (one elementary school, one middle school, and one high school in each county.) Participant schools

¹⁴ Please see Appendix A: Literature Review for additional information regarding this body of research.

would be funded for five years at a level that would cover an appropriate staffing complement, funding for library resources at the recommended level of \$15 per student and costs associated with participation of the library in the Delaware Library Catalog. These pilot libraries will be considered Quality School Libraries when they have achieved a score of at least 90 points on the School-Library Quality Index.

A strong Delaware School Libraries Council (DSLCC) is essential in making this and other initiatives a reality. Existing vacancies on the council need to be filled to ensure the effectiveness of DSLCC. DSLCC should work to make sure that Delawareans are fully aware of the benefits of strong school libraries. Furthermore, DSLCC should work with the Department of Education, the Delaware Division of Libraries, with school superintendents, legislators, and other interested parties to develop the pilot project to reach at least 90 points on the School-Library Quality Index.

Schools selected to participate should represent the diversity of Delaware's schools in regard to socio-economic factors and current student performance on standardized tests. Baseline data and ongoing progress data (using the School-Library Quality Index and test scores on specific standardized tests applicable to a given grade-level/school) would be tracked for the duration of the project to determine the impact of the improved library services on student performance. A mechanism for gradually shifting the cost of the program from soft funding to State and local school district funding could be built into the pilot effort.

In addition to seeking the funding necessary to support the on-site programs, funds should be included in the pilot program for the ongoing assessment process and staff development related to the pilot project for librarians, library support staff, teachers, and principals.

Content and Access

Recommendation 3: Expand Student Access to "E-Content"

Delaware should expand on its successful group licensing efforts represented by UDLib/SEARCH program and e-book licensing on behalf of all Delaware residents facilitated through the Delaware Division of Libraries to increase student access to additional online and downloadable e-content, especially e-books. The UDLib/SEARCH model already ensures equitable student access to an outstanding set of research and study tools. Expanding the program by providing statewide funding for curriculum-related e-books would address a serious disparity in the quality and quantity of other educational resources that currently exists. The program would be coordinated and administered as an extension of UDLib/Search. Expanding the Delaware Division of Libraries' e-book program to include more titles for children would provide enhanced access to general reading materials for all State residents including students and teachers.

The UDLib/SEARCH program is essential in leveling the playing field for all Delaware students. While there are tremendous disparities in regard to access to quality collections of print materials in Delaware's school libraries, all public K–12 students as well as the students in a majority of private school students in Delaware have equal access to a wide array of high-quality databases such as critical reference materials and full-text journal articles. State-level funding for these resources

enables Delaware to provide a baseline of important educational/curriculum-related content in the most cost effective way possible.

While UDLib/SEARCH offers a wealth of databases, the current funding level for the program allows for the licensing of a very limited number of e-books. Harnessing the University of Delaware's expertise and the licensing infrastructure that is already in-place through UDLib/SEARCH could go a long way toward improving the depth and breadth of library and information resources available to every child in Delaware. The investment of \$350,000 in curriculum-related e-content licensing that would be shared among all public schools has the potential for a tremendous return on investment. A prorated amount of this total expenditure would be included when calculating the per-student expenditure factor at the building level.

An expansion of the Delaware Division of Libraries' e-book efforts would also benefit students by providing all state residents, including school children with additional reading materials. These items would be available to all. An expenditure of an additional \$250,000 is recommended. This hybrid licensing approach (curriculum-related materials through UDLib/SEARCH and enrichment materials through the Division of Libraries) is designed to maximize the State's purchasing power. Licensing that is limited to students (as well as teachers, school administrators and parents) is less costly than licensing curriculum-related materials for all state residents (many of whom would not use the curriculum-based resources).

It should be noted that the data infrastructure of Delaware's schools must be upgraded to ensure that all students in Delaware are able to access the resources provided by this expansion of electronic databases and content. According to Senate Concurrent Resolution 22 (Delaware, 2015) the State "currently pays for 10 megabytes of bandwidth to schools, which falls well below the recommended amount to support the internet needs of the student population." Improving the bandwidth available to each school will allow students to access these additional resources quickly, while also ensuring that the data infrastructure will not be overburdened.

Recommendation 4: Expand the Delaware Library Consortium to Include all School Libraries

The Delaware Library Catalog, provided through the Delaware Library Consortium (DLC), offers residents of the First State single-search access to the holdings of every public library in the state. The holdings of all Delaware school libraries should also be reflected in the Delaware Library Catalog. This would result in more efficient student access to valuable library and information resources as well as the more efficient use of the State and local tax dollars that are currently spent to purchase library materials. Students would likely make greater use of public library materials as well because a single search would enable them to find relevant resources wherever they exist in the state. Finally, the inclusion of school libraries in the Delaware Library Catalog would also strengthen the concept of a lifelong learning continuum involving schools and public libraries and move Delaware toward the "seamless information landscape" envisioned in the 2004 Todd study.

Participation of all school libraries in the existing DLC, which already includes all public and some academic libraries, would streamline student and teacher access to a wealth of materials in libraries

throughout the state. Participation in the Delaware Library Catalog would greatly expand the diversity of materials available, would simplify interlibrary loan, and would offer students and teachers a familiar interface for searching for resources in school, at home, and in their community libraries.

Participation of school libraries would also facilitate coordinated collection development both within and across districts. Students and teachers would also have easier access to other resources such as Lib Guides, e-books through the Delaware Division of Libraries, and the “Ask a Librarian” virtual reference program. While these services are currently available to students and teachers, they would be more likely to use them if they were using the same entry portal in the schools that is available at home and in their public library.

Having all schools as participants in the DLC could also provide greater impetus to extend the Delaware Library Catalog beyond its existing primary function of serving as a finding tool. Making the Delaware Library Catalog a primary source of directly accessible resources (such as direct access to online databases and downloadable content from catalog searches) would greatly benefit all state residents in addition to enriching the resources available to students and teachers. Collaboration with public libraries on collection, development, and management would enable school librarians to spend more time and attention on collaboration with teachers and fulfilling students’ needs.

The development of this unified library platform will fulfill a key recommendation of the Aspen Institute’s *Rising to the Challenge: Re-Envisioning Public Libraries* (2014) report. This report called for the creation of “a digital public library model [that] would have a single interface—or at most a few—that allows existing online library catalogs to be fully integrated with new ones. It will provide a single point of access to all titles, taking the burden of both technology and archiving off individual libraries” (Garmer, 2014).

Finally, inclusion of school libraries in the DLC would ease the data collection burden on school librarians by providing centralized “live-data” regarding number of holdings, recency of materials by subject/topic and circulation activity. This would also assist school librarians in refining their collection development practices by making valuable real-time information available to them.

There has been some discussion of creating a statewide school-library catalog/resource sharing system by expanding on the Follett “Destiny” school-library management system. This would clearly be an improvement over the status quo; however, expanding the DLC to include school libraries would accomplish all that a statewide destiny system would accomplish and would, in addition, link school libraries with public library resources and provide a shared portal for the delivery of informational and educational content.

Governance and Infrastructure

Recommendation 5: Establish Specific Governance Responsibilities for the Coordination and Oversight of School Libraries

Specific responsibilities for the coordination of oversight of Delaware's school libraries should be codified and implemented. To ensure coordination and cooperation between school and public libraries in the further development of a continuum of lifelong learning, some of these responsibilities should be given to the Delaware Department of Education, while other responsibilities should reside in the Division of Libraries.

At the present time, the health and status of school libraries is largely determined at the district and school building level. While some aspects of this local control are certainly positive, the lack of coordination and oversight at the state level has resulted in inequities and an unevenness in student access to an essential element in positive learning outcomes. State-level coordination of school-library services would also assist local administrators and librarians by increasing awareness of emerging trends, best practices, and supplemental funding opportunities.

We recommend that a full-time position be established within the Delaware Department of Education to serve as the coordinator of school-library programs. The position should be filled by a certified library media specialist with first-hand experience in school libraries. Duties of the position would include planning programs, conducting assessments, and coordinating staff development for school libraries. The coordinator of school-library programs would also provide assistance and guidance to schools and school districts to ensure that best practices and new and emerging trends in school-library service are incorporated into the assessment of library staff.

The school-library coordinator would oversee the collection and analysis of relevant statistics and would report annually on the status of school libraries as it relates to student performance. The Department of Education position would also be involved in statewide planning related to the improvement of school-library services in coordination with the Delaware Division of Libraries, would identify potential sources of grants to support school-library initiatives, would coordinate staff development opportunities for school-library personnel, and would coordinate the development and maintenance of web-content related to best-practices in school libraries. The school-library coordinator would also facilitate strategic planning for library services in coordination/cooperation with Delaware Division of Libraries staff involved in strategic planning for public libraries. Finally, the person in this position would staff the Delaware School Libraries Council.

Ideally, each school district would also employ a library/media coordinator to oversee school-library improvement at the district level. The district library/media coordinator or, if such as position does not exist, one librarian in each district should be designated to act as the district's liaison with the Department of Education's school-library coordinator.

It is also critical to ensure that school libraries are supported in ways that leverage other taxpayer resources to advance student learning. Consequently, we recommend that an additional position be established within the Delaware Division of Libraries. This position would coordinate school

participation in the Delaware Library Consortium, would cooperate with the UDLib/SEARCH program in regard to e-content licensing, and would serve as a liaison between school and public libraries. This position would also facilitate strategic planning for public libraries in coordination with the Department of Education's school-library coordinator who would be charged with strategic planning responsibilities for school libraries.

Recommendation 6: Examine and Address Systemic Issues that Inhibit the Development of High-Quality School-Library Programs

The importance of having a high-quality school library staffed by a certified librarian in every school cannot be overstated. Adequate staffing, sufficient quality resources, and a supportive administrative culture are all critical components that allow school libraries to serve as a catalyst for improving learning outcomes for all students, regardless of socioeconomic status. Unfortunately, several issues such as the absence of a designated funding source for staff and materials, insufficient mechanisms for the evaluation of librarians, and a lack of understanding regarding the impact that high-quality school-library programs can have on students hinder their development and performance. These issues must be examined in further detail, and solutions should be developed to address them.

Currently funding (Title 14, Chapter 17 State Appropriations) for school librarians is based entirely on the discretion of school and district administrators, creating a situation where there is a competition for limited funding between librarians and other valuable specialty positions/services. As discussed throughout this report, librarians serve a vital role by promoting reading, enhancing communication skills, and providing access to a wealth of information and technology to all students. Recommendation 1 is designed to ensure that every school will have access to this valuable resource despite competition for funding.

More must be done to develop an administrative culture at the school and district level that is supportive of libraries. Doing so will require enhanced advocacy efforts by school librarians and stakeholders that showcase how the activities/programs of school libraries can address the pressing issues of public education in Delaware today, such as improving learning outcomes and access to resources for students that are living in poverty and assisting with the integration of English language learners into the classroom. Linking school-library programs to these pressing issues will enhance their value to school/district administrators, and can lead to the development of a supportive administrative culture, which will allow them to effectively compete for funding that is provided at the discretion of school and district leadership.

The quality of library resources in many schools across the state is also suffering due to insufficient funding. To ensure that all students have access to relevant, up-to-date, high-quality resources, legislation must be proposed that addresses the issue of per pupil expenditures for new library resources by establishing incentives to reach specific targets. Target levels for this element should also be based on the recommendations found in the School-Library Quality Index. An expenditure target of \$15 per student (adjusted annually to reflect inflation) is the ultimate goal.

The mechanisms currently in place to evaluate the performance of school librarians must be enhanced to ensure that constructive feedback is provided to staff. Across the state, there is a lack of a unified understanding of the role of the school librarian and the metrics that must be used to evaluate performance. In some instances, they are evaluated as teachers, and in others, they are assessed as specialists. This lack of a unified performance appraisal hinders the professional development of staff and forces administrators to base decisions off of incomplete information. Several principals reported that the performance appraisal process for librarians is difficult due to the lack of a clear understanding of the librarian's role. Developing a statewide job description for school librarians, along with the metrics that should be used to determine performance, should be assigned to the Department of Education. Routinized procedures must be established, and qualified evaluators must be trained.

Recommendation 7: Leverage Every Student Succeeds Act (ESSA) Funding to Strengthen School Libraries

Delaware should take advantage of the Every Student Succeeds Act of 2015 (ESSA) to strengthen its school libraries in specific, targeted ways. The reauthorization of the Elementary and Secondary Education Act (ESEA) as the ESSA places a greater emphasis on school libraries and provides opportunities for leveraging federal funds to enhance student learning through the improvement of Delaware's school libraries.

The Delaware School Libraries Council should partner with the Department of Education and the Division of Libraries to determine how federal funding through ESSA can be used to support a renewed emphasis on the quality of school libraries. School libraries are more prominently mentioned in ESSA than they were in ESEA. While specific uses of ESSA funding will depend on other uses, at a minimum, the following areas should be explored in greater depth.

Title I, Part A funds might be used to support planning activities at the state and district levels. Title II, Part A funds could conceivably be used to support library staff development and programming activities.

Title II, Part B, Subpart 2 might be used to encourage and enhance librarian/teacher collaboration in activities related to literacy. Title II, Part B, Subpart 2, Section 2226 could be used to support specific innovative literacy initiatives aimed at low-income communities. Finally, Title IV, Part A block grant funds could be used for a variety of efforts related to libraries.

Recommendation 8: Implement Flexible Scheduling for School Libraries

Delaware school libraries should work with their local administrations toward the implementation of a flexible scheduling model for all libraries. Research indicates that the quality of interaction between librarians and teachers is greatly enhanced when library services are operating within a flexible scheduling environment. Schools should be encouraged and incentivized to implement flexible scheduling or at least to establish a hybrid of fixed/flexible scheduling.

Research demonstrates that operating under a flexible versus fixed schedule has a great impact on the degree to which librarians and teachers have an opportunity to collaborate and the degree to

which students are able to participate in activities directly related to their development of critical thinking skills (Lance, Rodney, and Russel, 2007).

The decision to implement fixed or flexible schedules is typically made at the building level and often is highly intertwined with a host of other scheduling decisions related to teachers and other staff. Moving away from the fixed framework and toward the flexible framework may require an incremental change. This change is unlikely to come unless all parties are aware of the significant benefits of the change. A combination of steps may help the transition.

Pilot projects should provide an opportunity to document the benefits of the flexible model. The inclusion of fixed versus flexible in the School-Library Quality Index may also encourage movement from fixed to at least a hybrid approach. The dissemination of this report among legislators, school board members, district administrators, principals, and teachers and the scheduling of webinars and other opportunities to build an understanding of the benefits of adopting a flexible model is also important. Education and demonstration are the keys to change in this area.

Assessment and Accountability

Recommendation 9: Design and implement an ongoing program of data collection, management, and assessment for school libraries

Delaware should design and implement its own ongoing assessment/data collection/data management effort to document the gains resulting from additional investment in the state's school libraries. The dearth of quality comparative data regarding school libraries makes assessment difficult, and in some instances, impossible. Data collection should be limited to a small set of essential data with specific application to measuring the impact of quality library services on student performance.

In the past, some basic information regarding school libraries was collected through the National Center for Educational Statistics (NCES) Schools and Staffing Survey (SASS). While incomplete in its scope, SASS at least provided some baseline information that could be used for comparative and research analysis purposes. However, SASS has now been replaced by the National Teacher and Principal Survey (NTPS). Unfortunately, the NTPS survey captures little more than verification of whether or not an individual school has a library. This severely limits the ability of schools, school districts, and state education agencies to assess the impact of investments in school libraries.

We recommend the development and implementation of a data-collection tool that would be administered each year. To avoid adding a considerable burden on librarians who are often already overextended, data collection should be highly targeted. It should include information identifying the school, the data elements included in the Delaware School-Library Quality Index (see Recommendation 4) and only a few others relevant to the ongoing assessment of the correlation between school-library quality and student performance.

Initial list of data elements to be collected include:

- Librarian on-site (building level)
- Status of certification of librarian
- Number of hours per week the librarian spends on library-related functions
- Paraprofessional/library support staff on-site (building level)
- Number of hours per week the paraprofessional spends on library-related functions
- Total library expenditures by revenue source (State, district, grant, other)
- Total expenditures for new materials (includes print, non-print/media, e-content) by revenue source
- Number of new items added to the library collection during the previous year (tracked through participation in the Delaware Library Catalog)
- Total library collection size (number of items, number of e-books available, etc.) (tracked through participation in the Delaware Library Catalog)
- Average number of quality librarian/teacher interactions per week (co-teaching, participation with teachers in PLCs, etc.)
- Average number of librarian/student interactions per week (including structured class visits, but does not include study-hall type contacts)
- Library access for students and teachers (fixed schedule, fixed/flexible mix, flexible schedule)
- Number of computers and/or tablets available to students in the library
- Total number of items circulated (tracked through participation in the Delaware Library Catalog)
- Number of items circulated by subject area (tracked through participation in the Delaware Library Catalog)

Specific definitions of each data element, appropriate measurement techniques (appropriateness of sampling versus actual count, etc.) would be outlined in an assessment tool guide and would be a shared responsibility of the Delaware Department of Education and the Division of Libraries.

Training in collecting and reporting the data would be provided by the Department of Education's school-library coordinator. It should also be noted that the participation of all school libraries in the Delaware Library Consortium would allow for the real-time capturing of several of the data elements and would offer the tracking of material usage by topic/subject. This would make valuable information available in efforts directed at creating a lifelong continuum of learning involving school and public libraries.

Recommendation 10: Create a Delaware School-Library Quality Index to Facilitate the Tracking of Student Performance and Investment in School-Library Services

Delaware should implement a "School-Library Quality Index" that uses the data collected as the result of Recommendation 9. This index would create a rating of school-library services that would be used in concert with standardized testing results to measure the impact that specific, targeted investments in school libraries have on student performance.

As was noted at the beginning of this report, attaining positive student learning outcomes is not as simple as maintaining an attractive school-library facility or even filling such a facility with up-to-date, relevant materials and state-of-the art technology. A reliable measurement of library quality must be available to accurately measure the correlation between the provision of quality of school libraries and student performance.

We recommend the adoption of a “School-Library Quality Index” that quantifies the degree of excellence. The index would use ratings on a variety of data elements to achieve a score for each library ranging from 0 to 100. The weighting of each data element is related to the importance of the various elements identified in previous research. Consequently, the largest number of points is related to the provision of a certified library media specialist and library support staff. Other points are allocated for expenditures per student for new resources (print, non-print/media, and online and downloadable content), new items added to the library collection per student, library collection size per student, number of librarian/student interactions, number of librarian/teacher interactions, flexible versus fixed scheduling, and the availability of technological resources such as computers and tablets in the library.

Table 3: Certified Library Media Specialist (35 points)

Enrollment	Certified Library Media Specialist Target
0 – 299	.5 Full-Time Equivalent
300 – 999	1.0 Full-Time Equivalent
1,000 – 1,599	1.5 Full-Time Equivalent
1,600 or higher	2.0 Full-Time Equivalent

- 35 points for reaching the appropriate library media specialist (LMS) target
- 10 points for reaching target one-level below recommendation

Table 4: Library Support Staff/Para-Professional (10 points)

Enrollment	Library Support Staff/Para-professional Target
0 – 299	.0 Full-Time Equivalent
300 – 999	.5 Full-Time Equivalent
1,000 – 1,599	1.0 Full-Time Equivalent
1,600 or higher	2.0 Full-Time Equivalent

- 10 points for reaching the appropriate library support staff/para-professional target in addition to reaching LMS target level
- 5 points for reaching target one-level below recommendation

Table 5: Expenditures per Student for New Acquisitions/Resources (10 points)

Per Student Expenditure	Points
\$0.00 - \$0.99	0 points
\$1.00 - \$2.99	1 point
\$3.00 - \$4.99	2 points
\$5.00 - \$6.99	3 points
\$7.00 - \$8.99	4 points
\$9.00 - \$10.99	5 points
\$11.00 - \$12.99	6 points
\$13.00 - \$14.99	8 points
\$15.00 or higher	10 points

Table 6: New Items Added to Library Collection per Student per Year (5 points)

Items Added per student	Points
0.00 – 0.99/ student	0 points
1.00 – 1.99/ student	1 point
2.00 – 2.99/student	2 points
3.00 – 3.99/student	3 points
4.00 – 4.99/student	4 points
5.00 or more/student	5 points

Table 7: Collection Size per Student (5 points)

Items per Student	Points
0.00 – 9.99 items per student	0 points
10.00 – 14.99 items per student	1 point
15.00 – 19.99 items per student	2 points
20.00 – 24.99 items per student	3 points
25.00 – 29.99 items per student	4 points
30 or more items per student	5 points

Table 8: Librarian/Student Interaction (10 points)

Group (Classroom) Visits per Week	Points
0.00 – 1.99 quality classroom visits per week	0 points
2.00 – 3.99 quality classroom visits per week	1 point
4.00 – 5.99 quality classroom visits per week	2 points
6.00 – 7.99 quality classroom visits per week	3 points
8.00 – 9.99 quality classroom visits per week	4 points
10.00 – 11.99 quality classroom visits per week	5 points
12.00 – 13.99 quality classroom visits per week	6 points
14.00 – 15.99 quality classroom visits per week	7 points
16.00 – 17.99 quality classroom visits per week	8 points
18.00 – 19.99 quality classroom visits per week	9 points
20 or more quality classroom visits per week	10 points

A “quality” classroom visit involves more than simply the presence of a class in the school-library facility for “study hall” purposes. A quality visit would include instruction in the usage of library resources or personal interaction between the librarian and individual students or groups of students related to finding, evaluating, and using information resources. Visits of the librarian to classrooms (as opposed to students visiting the library facility) could be counted as quality classroom visits if instruction is provided that relates to the effective use of library services and resources.

Table 9: Librarian/Teacher Interaction (10 points)

Contracts per Week	Points
0.00 – 0.99 quality contacts per week	0 points
1.00 – 5.99 quality contacts per week	2 points
6.00 – 10.99 quality contacts per week	4 points
11.00 – 15.99 quality contacts per week	6 points
16.00 – 19.99 quality contacts per week	8 points
20 or more quality contacts per week	10 points

Co-teaching involvement and participation in Professional Learning Communities (PLCs) meetings would qualify as a quality librarian/teacher interaction as would individual meetings with teachers to identify appropriate resources for students, plan co-teaching activities, and conferences to identify resources that might be acquired to support a particular curriculum. Librarians should be involved in the development of these guidelines and collection of data might be a periodic sampling rather than an ongoing count.

Table 10: Fixed Versus Flexible Schedule (10 points)

Schedule Type	Points
Fixed	0 points
Combination Fixed/Flexible Schedule	5 points
Flexible Schedule	10 points

Table 11: Technology Resources Availability at the Building Level per Student (5 points)

Computers/Tablets Available per Student	Points
0.00 – 0.99 computers/tablets per student	0 points
1.00 – 2.99 computers/tablets per student	1 point
2.00 – 3.99 computers/tablets per student	2 points
3.00 – 4.99 computers/tablets per student	3 points
5.0 - 9.99 computers/tablets per student	4 points
1 or more computers/tablets per student	5 points

Moving Forward

“Promote then, as an object of primary importance, institutions for the general diffusion of knowledge. In proportion as the structure of a government gives force to public opinion, it is essential that public opinion should be enlightened.” George Washington, 1796

As this Master Plan, accompanying literature review, and vast body of research known as the “impact studies” have shown, quality school libraries can have a significant impact on student achievement in a variety of academic subjects. All students, regardless of race, geographic location, and socioeconomic status, experience these positive impacts. The Master Plan’s recommendations, which have been developed through extensive research and fieldwork, are designed to develop a holistic system that leads to high-quality school libraries statewide. They address areas including staffing, access and content, governance and infrastructure, and assessment and accountability. Adopting the recommendations in each of these categories is critical because they, as a whole, will lead to the development of a robust and responsive infrastructure that will allow school libraries to flourish across the state.

While the implementation of these recommendations will require an extensive allocation of financial and human resources, the anticipated outcomes clearly justify the expected effort. High-quality school libraries will not only lead to improved learning outcomes for all students, but will also lead to the nurturing of life-long learners that are able to appropriately analyze and synthesize information from a variety of sources. These life-long learners will eventually be Delaware’s leaders and residents, therefore, it is critical for the state’s economic and societal well-being that all students receive the benefits provided by high-quality school libraries.

Ultimately, investment in the development of high-quality school libraries enhances student learning and performance by providing students with the resources and guidance they need to succeed. Providing adequate access to timely, appropriate learning resources and professional direction in how to find, evaluate, and navigate the confusing universe of information and misinformation will build essential research and critical thinking skills that will serve students well both in school and in the workplace.

Appendix A: Literature Review

Introduction

The following document is a compilation of findings from the research used to develop the *Delaware School Libraries Master Plan: Quality School Libraries=Higher Student Achievement* and its accompanying recommendations. This literature review encompasses topics including the characteristics of quality school libraries and how they impact student performance, the role of the school librarian, library technology, and the development of partnerships between school and public libraries. Literature covered in this review includes numerous school library impact studies and relevant journal articles and publications.

Quality School Libraries

A quality school library can be the core of the school, a hub where learning flourishes. It should be transformative and lead to improved student performance. According to the *Delaware School Libraries Council's Annual Report* (2013), a quality library has the following characteristics:

- Sufficient funding
- A current and full collection
- Current technology and staff with the ability to use it correctly
- A full-time certified librarian
- Integration into the school curriculum that supports literacy and student achievement
- Flexible scheduling

This section will focus on these characteristics and their ideal corresponding goals, along with the impact that achieving these goals can have on student performance. It will also include best practices related to the environment and physical features of the library to provide decision-makers with an idea of what a quality library looks like, and the characteristics that it exhibits.

Funding

Sufficient and stable funding is one of the most important characteristics of a quality school library. Multiple library impact studies have found that higher expenditures per student and overall library spending correlates with higher test scores. According to a 2000 study of Pennsylvania school libraries (Lance, Rodney, Pennel-Hamilton, 2000), “higher achieving schools often spend twice as much—or more—on their school library programs as lower achieving schools” (Gretes, 2013).

Without adequate funding, libraries cannot be sufficiently staffed or have up-to-date collections and technology. According to The School Library Journal's *2014 Spending Survey: Savvy Librarians Are Doing More with Less*, many libraries only function because school librarians are willing to utilize their own resources to support their insufficient budgets (Barack, 2014). In 2007, an average of \$11,015 was spent nationally by school libraries on information resources, which include print

and non-print materials, licensed databases, and other methods to access electronic information (Davis, 2009).

In 2004, over half of Delaware's school libraries had annual budget allocations below \$6,000 (Todd R. J., 2005). The *Delaware School Library Survey* (2004) describes a high-quality school library as having budget allocations of \$12 to \$15 per student on information resources (Todd R. J., 2005). This compares favorably with American Library Association data from 2008 that shows \$12 as the national average for per-student expenditures on information resources. However, it should be noted that the data also shows that \$12 was only two-thirds the cost of a fiction title (\$17.26) and one-third the cost of a non-fiction title at that time (\$27.04) (Davis, 2009).

In 2011, the Commonwealth of Pennsylvania produced the *Guidelines for School Library Programs* that provides quantitative inputs and outputs to guide performance. The guidelines are based on results from previous studies in the state that demonstrated the positive impact that school libraries can have on student test scores. In order to produce these improved learning outcomes for students, school libraries need sufficient budgets. For this to be achieved, according to the study, the total expenditures per student must be \$41 in an elementary school library, \$45 in a middle school library, and \$50 in a high school library (Office of Commonwealth Libraries, 2011). The report divided these total expenditures per student into print, audiovisual, and electronic resources budgets.

Collection

A current collection is one of the key attributes of a quality school library. Robust collections can inspire a passion for reading in students and provide them with access to a wealth of information in a variety of subjects (Office of Commonwealth Libraries, 2011). Without up-to-date resources, libraries cannot provide students with adequate access to information. For instance, if STEM books are older than 5 years old, they will no longer provide students with the most recent findings in their subject matter (Delaware School Libraries Council, 2013). According to the 2013 *Annual Report* by the Delaware School Libraries Council, only 29,998 of 299,169 STEM books (10.3 percent) in the 167 participating schools in Delaware met this standard. Age of resources is not only important for STEM books, but for all collection materials. In 2013, of the 2,154,929 items in 169 Delaware schools, the average year of publication was 1994.

Robust, timely collections are a crucial component of school libraries that can increase learning outcomes for all students. In a 2012 impact study in Pennsylvania (Lance and Schwarz, 2012), the research team found that for “Black and Hispanic students, access to more than 12,000 library books more than doubles their chances of obtaining ‘Advanced’ Writing scores and cuts their risk of ‘Below Basic’ Writing scores in half” (Kachel, 2013). These findings show that a library with a robust collection can have a significant impact on improving writing scores and closing the achievement gap for minority students.

The Standards for School Library Media Centers: Delaware Public Schools (2002) states that in order to function properly, a library collection should have 15 currently useful volumes per student. (Delaware School Libraries Council, 2013). In 2004, Delaware's average of useful books per student

was 12.56 and data from the *Delaware School Library Survey* shows that 37 percent of school libraries did not meet the minimum resource recommendation (Todd R. J., 2005). The Commonwealth of Pennsylvania states that the minimum volumes per student should be 15 in middle and high schools and 20 in elementary schools, while the ideal amount is 20 in middle and high schools and 25 in elementary schools (Office of Commonwealth Libraries, 2011)

In the digital age, e-books, e-readers, and tablets are expanding their presence in school libraries. In 2014, 66 percent of schools nationwide offered e-books. The median number of e-books remains at a low 189 titles per school compared to 11,300 print books, but school librarians expect e-book spending as a percentage of their total materials budget to quadruple in the next five years (Sun, 2014). Quality school libraries are recognizing this digital shift and allocating more resources to electronic materials.

The School Library Journal conducted a survey in 2014, which examined how school librarians were attempting to keep up-to-date collections with their shrinking budgets. According to the survey, the adoption of digital tools and content were among the most important priorities of the school librarians even if their budget did not support it. Forty-six percent of elementary school librarians reported that digital use was up, and 60 percent reported that print use was down. At the middle school level, 45 percent reported that digital use was up, and 60 percent reported that print use was down. Of the high school librarians, 46 percent reported that digital use was up, and 59 percent responded that print use was down. The 43 percent of respondents that purchased e-books in 2012–2013 spent an average of \$1,100 on this type of content, and 34 percent of these respondents expected to spend more on e-books in the future (Barack, 2014).

E-books refer to digitized versions of print books and textbooks. They are often formatted for and accessed on specialized e-readers, but many are also available on desktop computers, laptops, and smartphones. E-books provide several advantages for students and schools compared to traditional print books. Digital resources are available every day of the year and at all times of day, while print resources are only accessible for students during limited library hours, unless they are checked out and taken home. When e-books are made available on smartphones, they are especially convenient for students and there is anecdotal evidence that they inspire students to read more fiction on their own time (Nelson, 2012). E-books are also generally cheaper than print books (Davidson & Carliner, 2013), so students can gain access to a wider breadth of resources in libraries that allocate funding to e-book purchases. While library media centers estimated that they spent a median of \$402 on e-books in 2013–2014, 20 percent of libraries managed to spend no money on e-books, acquiring them instead through state, district, or consortium membership (Sun, 2014).

Although studies have found that elementary school students performed equally well when using e-books versus print textbooks, there are some drawbacks to the use of e-books. Some students have found that the readability of e-books is lower and struggle with the basic functions of e-books such as highlighting (Davidson & Carliner, 2013). Reading from a screen takes twenty to thirty percent longer than reading from paper, has been found to cause more stress and require more effort, and can make it harder to remember what has been read (Marcum, 2012). While e-books are generally cheaper than print books, they require expensive technology, like computers and e-readers, to

access. If students do not have these technologies at home, or if licensing agreements only allow access to digital resources within the school, it may be difficult for students to access digital resources outside of school hours.

Due to advances in technology, databases are now readily available for students to access in school libraries with the guidance of librarians. Databases are searchable online compilations of published works that students can use for research (Enoch Pratt Free Library). They are available from a range of publishing companies and some are directed toward specific age groups and disciplines while others are more general (Michaelson, 2014). School libraries obtain access to databases for their students by purchasing subscriptions. In Delaware, K–12 public schools have access to UDLib/Search, a collection of databases that provide online magazines, journals, encyclopedias, and educational activities (About UDLib/Search, 2015). While access to the UDLib/Search databases and technical assistance/training are free for schools that participate, the State contributes significant funding each year to pay for licensing fees, personnel, and other operating costs. The number of UDLib/Search searches made each year generally increases, showing that public schools are using the databases (Miller, 2015).

It is often the responsibility of librarians to choose databases that both fit the needs of their students and are accessible (Michaelson, 2014). Furthermore, students must also be taught proper use of databases. Students today prefer to use general search engines like Google to find information. Zimmerman (2012) argues that most students revert to using Google because, “They find that the schools they attend provide access to a lot of data, but it is at the cost of learning a highly developed method of searching. This is not an obstacle to a trained librarian, but it is a large obstacle to an untrained student.” Librarians can train students in the use of databases and ensure they have the skills to take full advantage of the online resources that a library offers.

Technology and Information Literacy

In the 21st century, quality school libraries must provide up-to-date technology. Moreover, quality school libraries must also employ certified librarians with the knowledge and skills to utilize technology and teach others to how to do so. According to the National Board for Professional Teaching Standards (NBPTS), with current technology, libraries can further their role as the hubs of school communities (Library Media Standards, 2012). One librarian underlined the importance of technology by stating, “Here we are in a computer era where the amount of information is doubling every couple of months. The kids need more help than ever before to locate information and to apply it and analyze it. It’s just amazing to me that were [sic] not seeing it as more beneficial than ever before” (Pascopella, 2005). The 21st century school library plays two vital roles: 1) providing access to technology and 2) promoting information literacy.

Providing Access to Technology

School libraries play a vital role in giving students access to technology, because many students do not have access to these resources at home or in their communities outside of school hours. According to the Pew Research Center, as of September 2013, 70 percent of adult Americans had broadband access at home, but only 52 percent of adult Americans that made less than \$30,000 a

year had access to this service (Zickuhr and Smith, 2013). These data show that a significant portion of the population still does not have access to high-speed internet at home, which can make completing classwork outside of school difficult for students who cannot efficiently acquire information online. A study conducted by the New York Comprehensive Center in 2011 came to the conclusion that “school libraries are important in supporting the development of 21st century skills, including those that require technological literacy. The digital divide that many at-risk students face can be alleviated with the resources and technological instruction school libraries offer” (New York Comprehensive Center, 2011). Not only do school libraries provide access to technology, but they also provide students with the opportunity to learn how to use it effectively and responsibly through the guidance of professionally trained school librarians.

According to a 2006 study conducted on Delaware’s school libraries, “the most helpful dimensions of school libraries, as perceived by both students and faculty, center on the central place of information technology in accessing information and using the technology to enable students to complete their school work” (Todd and Heindstrom, 2006). Survey results showed that 88.9 percent of students found that computers provided in the school library were at least a little helpful with regards to improving their ability to complete school assignments, while 94.1 percent found that computers located in school libraries were at least a little helpful in assisting them with acquiring information located both inside and outside school libraries.¹⁵

Promoting Information Literacy

In addition to providing Delaware’s students with access to technology, school libraries also improve the information literacy of many students. For instance, 94.2 percent of students responded that the school library was at least a little helpful in teaching them the different steps involved in acquiring and using information, while 90.3 percent believed that it was at least a little helpful in assisting them with finding different opinions about topics of interest (Todd and Heindstrom, 2006). School libraries also provide some students with assistance in determining the critical information provided by sources, with 91.7 percent stating that the school library was at least a little helpful in guiding them in identifying the most important things in the sources they review, while 87.6 percent found that the school library was at least a little helpful in teaching them to “be more careful about information [they found] on the internet” (Todd and Heindstrom, 2006). Nearly 92 percent of students mentioned that the school library was at least a little helpful by assisting them in determining the quality of information they found.

Impact studies conducted in New Mexico (Lance, Rodney, and Hamilton-Pennell, 2002), Wisconsin (Smith, 2006), New Jersey (Todd, Gordon, and Lu, 2010), and Washington (Coker, 2015) also showed the positive impact that school libraries can have on student learning outcomes through the provision of technology and lessons related to information literacy. One of the key findings in the New Mexico study was that “middle schools with the highest New Mexico Achievement Assessment Program (NMAAP) language arts scores were twice as likely as the lowest-scoring schools to provide access to licensed databases via a school library network” (Scholastic, 2015). In the Wisconsin study, researchers found that “elementary schools with more computers and

¹⁵ This includes the following four responses: *most helpful, quite helpful, some help, and a little help.*

technology equipment made up the top 25 schools with highest WCKE [Wisconsin Concepts and Knowledge Examination] scores in reading and language arts” (Kachel, 2013), and that “students valued most the library media specialist’s help in teaching unique skills not covered in the classroom—especially information, communication, and technology skills essential for students in the 21st century” (Scholastic, 2015).

The study in New Jersey went into detail on how school librarians in the state “made key contributions to student success” in areas such as: mastering of information literacy competencies, developing familiarity of the research process, modeling ethical use of information, and nurturing responsible use of technology (Todd, Gordon, and Lu, 2010). Meanwhile, the research team in Washington found that “students who attend schools with on-staff certified teacher-librarians (CTLs) have more equitable access to technologically advanced and accessible library facilities...greater access to databases and resources for longer times during the school day... [that are often] accessible outside the school as well... [and] are more likely to be taught information technology skills and technology fluency skills” (Scholastic, 2015). These findings are also supported by the research of Dr. Barbara Schultz-Jones and Dr. Cynthia Ledbetter, two scholars in the field of library and information science, who, after examining the correlation between school librarians and their impact on students’ information literacy skills, concluded that school librarians “can develop and nurture an optimal learning environment that makes a positive and measurable contribution to the educational process” (Schultz-Jones and Ledbetter, 2009, 2010). Multiple studies show that school libraries can play a significant role in providing students with access to technology, while also creating an environment where they can learn how to use it in an effective and responsible manner.

In Texas, school libraries have standards that follow the NBPST recommendations, and thus, the Texas Administrative Code (updated in 2011) encourages the use of technology in school libraries as a method of accessing, evaluating, and disseminating information (School Library Programs: Standards and Guidelines for Texas, 2005). According to the standards, a quality school library should:

- Provide students and staff with campus-wide and remote access to electronic library resources through a library-designed portal.
- Provide a web-delivered online public-access library catalog in the library, campus-wide, and remotely.
- Provide one administrative computer per library staff member.
- Provide two computers dedicated to circulation and one computer dedicated to teacher use.
- Facilitate the full integration of technology, including multimedia and the web into the curriculum and instruction.
- Employ a representative to serve on the school technology committee, help develop the school technology plan, and provide input in the development of the district technology plan.

- Employ a librarian that actively and systematically trains students and staff in the use of local, statewide, or national consortia technology initiatives, including statewide interlibrary loan, if applicable.

Pennsylvania also provides standards for school libraries related to technology. The state guidelines recommend that school libraries have internet capability as well as 35 computers per library or two-thirds of its seating capacity, whichever is greater (Office of Commonwealth Libraries, 2011).

Staffing

The majority of studies focusing on evaluating the impact that school libraries have on student learning outcomes go into detail on the importance of a full-time, state-certified librarian in cultivating a quality school library. Certified librarians have been found to boost student achievement, specifically reading scores and literacy rates. A properly staffed library has even been linked to better attitudes toward reading (Klinger, 2009).

One of the critical functions of a school library is to elevate the importance of reading in school by providing students with both the opportunity and encouragement to read. According to Scholastic's *Kids and Family Reading Report: 5th Edition*, a survey of 2,558 parents and children, 14 percent of children "read [for fun] at home and school equally, and 14 [percent] say they read for fun mostly in school" (Scholastic, 2014). Reading for fun in school is even more prevalent among low-income students. Of students (ages 6 to 17) from families that make less than \$35,000 a year, 19 percent read for fun primarily in school and 41 percent reading for fun about the same amount of time in school and at home. For more than half of students (52%), independent reading in the classroom is considered a positive experience with 34 percent mentioning that it is "one of [their] favorite parts of the school day" and 31 percent stating that they wished they would do it more often (Scholastic, 2014).

The school library is a key component in providing these students with the opportunity to read because, according to the survey, 77 percent of children ages 6 to 11 and 58 percent of children ages 12 to 17 found the books they read for fun at the library. Results from a 2010 Scholastic and Bill and Melinda Gates Foundation survey of 25,452 K–12 public school teachers also support this finding. In it, 83 percent of teachers stated that their students got the books they used for independent reading from the school library most often (Scholastic and Bill and Melinda Gates Foundation, 2010).

The results from these Scholastic surveys show that for many school-age children, particularly those from low-income households, the school environment is where they will find access to books and engage in a significant amount of their reading. Findings from a 2006 study in Delaware, which included a survey of 5,773 students from 13 elementary and high schools, showed that the school library can be helpful to students' "general reading interests." Survey results showed that 88.1 percent of students agreed that the school library helped at least a little¹⁶ when it came to providing them assistance in finding stories that they like. Approximately 83 percent of students

¹⁶ This includes the following four responses: *most helpful, quite helpful, some help, and a little help.*

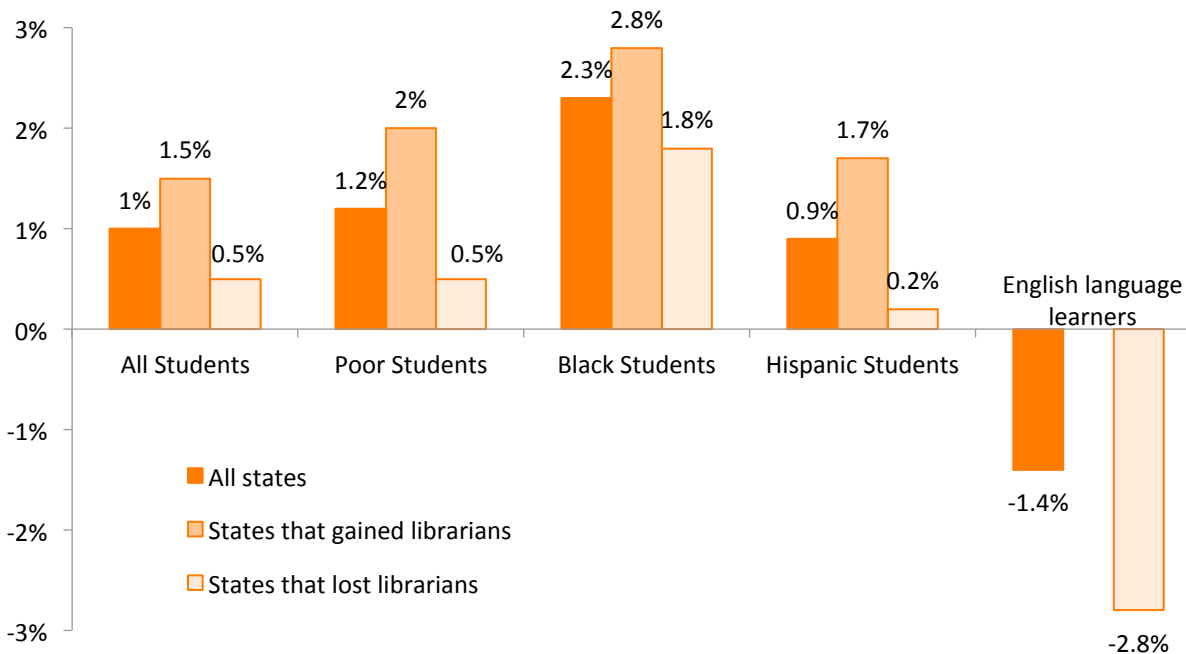
agreed that the school library was at least a little helpful in providing them assistance in reading more, while 81.3 percent agreed that it was at least a little helpful in assisting them with becoming a better reader (Todd and Heinstrom, 2006). The importance of the library in cultivating a love of reading was also evident in a 2006 study of over 800 elementary schools conducted in Ontario that found that “schools with teacher-librarians could be expected to have reading enjoyment scores that were 8 percentile points higher than average” (Queen’s University and People for Education, 2006). These findings show that school libraries are a critical component of a student’s educational experience, particularly if they are from a low-income household, because they provide them with access to books and the encouragement to read.

A recent study by New York University’s Steinhardt School of Culture, Education, and Human Development highlighted this issue by documenting the existence of “book deserts” in low-income, urban areas across the county. The study indicated that “access to print resources...early on has both immediate and long-term effects on children’s vocabulary, background knowledge, and comprehension skills” (Neuman and Moland, 2016). A meta-analysis of 44 studies conducted by Dr. Jim Lindsay found a similar relationship between access to print materials and student learning outcomes. Positive effects provided by print materials include (Lindsay, 2010):

- Improves children’s reading performance
- Helps children learn the basics of reading
- Causes children to read more and for longer lengths of time
- Produces improved attitudes toward reading and learning among children

These positive learning outcomes can eventually manifest themselves in improved scores on standardized tests by students. An analysis on the impact of school librarian layoffs in relation to fourth-grade reading scores collected by the National Center for Education Statistics between 2004 and 2009 conducted by Keith Curry Lance and Linda Hofschire showed that “regardless of whether there were fewer classroom teachers schoolwide, students in states that lost librarians tended to have lower reading scores—or had a slower rise on standardized tests—than those in states that gained librarians” (Lance and Hofschire, 2011). In fact, the researchers “found that 19 of the 26 states that gained librarians saw an average 2.2 percent rise in their National Assessment of Educational Progress (NAEP) fourth-grade reading scores... [while] 9 of the 24 states that lost librarians had a 1 percent rise” (Lance and Hofschire, 2011). The authors noted that while these changes may seem insignificant, “minor shifts are quite meaningful since there tends to be little overall change with fourth-grade NAEP reading scores over time” (Lance and Hofschire, 2011). Significant positive impacts on reading scores were also found for low-income, Hispanic, Black, and English language learner students.

Figure A: Percent Change in Fourth-Grade NAEP Test Scores, 2004-2005 to 2008-2009



Source: Lance, K. and Hofschire L., (2011, September). Something to Shout About: New Research Shows that More Librarians Means Higher Reading Scores. The School Library Journal.

The results from this analysis are similar to the ones found in the school library impact studies conducted in 25 states and Ontario (Scholastic, 2015). According to an analysis of these studies¹⁷ completed in 2013, this body of research confirms that “quality school library programs with full-time, certified librarians and library support staff are indicative of and critical to student achievement” (Kachel, 2013). This analysis includes a chart detailing 35 particular school library characteristics that were proven to have a “positive association with student achievement” and the study where each association was found. Library characteristics fall under the following categories: *staffing/availability, instruction/information literacy curriculum, professional development/training, collaboration/cooperation, electronic networking and technology, collections and resources, usage, and funding/budget*.

For instance, findings from an impact study conducted in Colorado in 2010 (Francis, Lance, and Lietzau, 2010) included that elementary schools with at least one full-time endorsed (state certified) school librarian had 4 to 5 percent more third, fourth, and fifth grade students scoring proficient or advanced in reading on standardized tests than elementary schools that did not (Scholastic, 2015). In this study, it was also found that schools with at least one full-time endorsed school librarian had 2 to 3 percent less third, fourth, and fifth grade students with unsatisfactory scores on standardized tests (Francis, Lance, and Lietzau, 2010). In a later impact study conducted in Colorado it was found that school libraries staffed only by assistants, as opposed to having a certified school librarian, had

¹⁷ Findings from a study conducted in South Carolina and one in Washington were not included in the analysis because they had not yet been released.

no influence over student reading scores (Lance and Hofschire, 2012). These results are similar to the findings of a study conducted in Florida in 2002 (Baumbach) where it was discovered that elementary schools that had libraries staffed for at least 60 hours per week had a 9 percent improvement in test scores over those that did not, while middle schools that fit this criterion had a 3.3 percent improvement. High schools that met this criterion had a 22.2 percent improvement in test scores (Scholastic, 2015).

A recent study conducted in South Carolina (Lance, Rodney, and Schwarz, 2014) also supports the findings that school libraries have a positive impact on student standardized test scores in reading and writing. The study found that there was a high correlation between the presence of professional school librarians and student test scores for three English Language Arts standards including literary text, informational text, and research. In particular, schools that had at least one full-time librarian and a full-time or part-time assistant had 2 to 3 percent more students receiving “exemplary” scores on the research section of the Palmetto Assessment of State Standards (PASS). Students at schools with at least one qualified, full-time librarian and one full-time or part-time assistant were 2 percent less likely to show weaknesses on the writing section of the PASS assessment and were 2.1 percent more likely to show strengths on content and organization components of the test. Findings from the study “could not be explained away by demographics such as gender, race/ethnicity, disability, and subsidized or free meals eligibility.”

Three recent impact studies conducted in Pennsylvania (Lance and Schwarz, 2012), Washington (Coker, 2015), and Kansas (Dow, Lakin, and Court, 2012) came to similar conclusions. In the Pennsylvania study, the research team concluded that “students in well-supported, resourced, and staffed school libraries achieve a higher level of academic success...” and that “Black, Hispanic, and students with disabilities or who were economically disadvantaged benefitted proportionally more than students in general...” meaning that “staffing libraries with certified librarians can help close the achievement gaps among the most vulnerable learners” (Scholastic, 2015). Specifically, in schools that had a full-time certified librarian, 2.5 percent more students scored advanced in writing on standardized tests, on average, than in schools that did not have a full-time certified librarian. This benefit nearly doubled when support staff assisted librarians in the school library. (Kachel, 2013).

Results from the study conducted in Washington, which examined 1,486 K–12 public schools, showed similar positive results, revealing that “students who attend schools with CTLs [certified teacher librarians] and quality library facilities perform better on standardized tests and are far more likely to graduate. Facilities with CTLs had an 85% five-year graduation rate, versus 79% for those without” (Scholastic, 2015). Findings from the Kansas study included that schools with higher and more stable staffing levels in school libraries had students with higher proficiency rates in reading, writing, mathematics, science, and history/government as measured in the Kansas Annual Yearly Progress data (Dow, Lakin, and Court, 2012). These results were found across all grade levels, and mathematics was the subject with the greatest difference in proficiency rates between schools with at least one librarian and ones without.

In fact, some elected officials in Delaware found the need for a certified librarian in every school so vital that they drafted House Bill 152, sponsored by Representative Paul Baumbach and Senator David Sokola. House Bill 152 requires that there be at least one library media specialist in every elementary, middle, and high school in the state (Delaware General Assembly, 2015). The need for this bill is underscored by it garnering bi-partisan support.

According to the 2004 *Delaware School Library Survey*, it is important that para-professional staff do not replace school librarians, but instead offer support by undertaking “routine administrative tasks and [freeing] the library media specialist to undertake instructional initiatives and reading literacy initiatives” (Todd R. J., 2005). The lack of support staff in Delaware has forced certified librarians to reserve time for administrative tasks instead of developing programs that will increase student achievement. In 2004, Delaware had para-educators employed in 60 percent of school libraries, with 54 percent of elementary school libraries having no para-educator support, and only 22 percent of school libraries having full-time support staff (Todd R. J., 2005).

Connection with School

Librarians should have a central role in supporting classroom learning. As educators, librarians have a broad base of knowledge and can help other teachers locate resources that enhance learning activities for students. However, research finds that collaboration among librarians and classroom teachers is not as extensive as it could be.

Promoting collaboration between librarians and educators is possible through administrative support. For instance, in Ontario, a principal in a school with a quality library strived to strengthen the relations between classroom teachers and librarians. To achieve this goal, the principal required each teacher to partner with the librarian once per year to co-develop and co-teach a lesson that aligned with the curriculum (Klinger, 2009).

Findings from school-library impact studies have shown the benefits that flexible scheduling and collaboration between teachers and school librarians can bring. For instance, in a 2005 impact study completed in Illinois (Lance, Rodney, and Hamilton-Pennel, 2005), the research team found that in high schools eleventh-grade ACT scores “were highest when there was a high degree of true collaboration between library media specialists and classroom teachers in a wide spectrum of activities” (Scholastic, 2015). It was also found that “elementary schools with more flexibly scheduled libraries performed 10% better in reading and 11% better in writing on the ISAT tests of fifth-graders than schools with less flexibly scheduled libraries” (Kachel, 2013). Similar findings were detailed in an impact study conducted in Indiana (Lance, Rodney, and Russel, 2007), where the research team found that “across grade levels, Indiana students tended to perform better on state tests where principals valued teacher-library media specialist collaboration, supported flexible library scheduling, met regularly with the library media specialist, and had the library media specialist serve on key school committees” (Scholastic, 2015). The findings of these studies show that a school library program, and dynamic librarian, that are integrated into the school curriculum and decision-making processes can have a significant positive impact on student performance.

Physical Environment

In a 2005 study, Appoquinimink School District described their quality libraries as the center of the school (Pascopella, 2005). Similarly, one school in Ontario with a model library described the room as near the school office, with cozy corners, colorful, well decorated, and even holding a piano (Klinger, 2009). The *School Library Media Quarterly* published an article that addressed additional elements that a quality school library should have. Primarily, it should be a warm, welcoming place. This type of atmosphere can be created through paint or with accent colors in posters or display boards. Carpeting is also recommended as it controls noise and appeals to children as a place to relax. If wall-to-wall carpeting is too expensive, school libraries can also purchase area rugs to provide a similar effect for students (Doll, 1992).

Modern libraries are used as meeting areas for students and thus need to have plenty of collaborative spaces. In a case study of Vancouver Public Schools, Digital Promise 501(c)(3) found that modern library spaces should be open and flexible, with moveable furniture that can create a variety of layouts. This allows students to arrange themselves into different groups and work effectively with each other (Digital Promise). An online survey that received hundreds of student responses from across the globe revealed that students prefer “student-friendly” libraries to the traditional library atmosphere, even if that means that spaces are louder and messier (Fingal, 2014).

The development of technology has created new needs for library spaces. According to the 2004 *Delaware School Library Survey*, more library media specialists regarded “space” as a priority for their library media centers than any other response (Todd R. J., 2005). One traditional function of a library is to provide desktop computers for classes. One study found that students and teachers both prefer rooms with “peripheral” layouts, which refers to a setup in which computer and work stations are arranged around the edges of the room with screens facing inwards. The “peripheral” layout allows for easy movement and collaboration between students and also allows teachers and librarians to monitor students’ work and ensure that students are staying on-task (Brush & Hew, 2007). Libraries can also save money by using laptops with wireless connections in order to save building and maintenance costs of the computer laboratories (Russell, Bebell, & Higgins). Library spaces should adapt to new technology by being flexible and optimized for student collaboration and the use of personal electronics and digital resources.

Summary of Quality School Library Research

A literature review completed by Gretes Research Services on behalf of the Harry and Jeanette Weinberg Foundation summarized the findings presented by the school-library impact studies as such:

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 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 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. (Gretes, 2013)

Overall, the common theme of this body of research is that an adequately staffed and supported school library can have a significant positive impact on the educational experience of students, which can then be realized through improved standardized test scores. School libraries are an integral component of a student's educational experience and numerous studies have shown that their services can lead to improved learning outcomes for individuals from all backgrounds (Gretes, 2013). By providing all students with access to books and technology, implementing programs focused on encouraging reading, and promoting information literacy, school libraries are helping to prepare students for success in the 21st century.

The Role of the School Librarian

K–12 school librarians are an integral part of school communities and can lead to improved student learning outcomes. School librarians' success is contingent upon various *enablers* and *barriers* that they face in their careers. One of the most significant factors that has changed the role of school librarians is the advancement of technology. In this digital age, librarians have the potential to lead in technology integration by teaching both students and other educators how technology can positively impact academic growth. While technological competencies are becoming increasingly important, librarians must also preserve and demonstrate the traditional librarian skills of teaching students how to be critical thinkers and inspiring them to be lifelong readers and learners. School librarians can make an invaluable impact on entire learning communities and students. School librarians have demonstrated the importance of their roles, and they can continue to positively impact education systems across the nation if they receive adequate support from decision-makers.

The following section will examine the role that the school librarian plays in the school community. It will begin with an examination of the process that school librarians must go through to receive their credentials, and then continue with a description of potential enablers and barriers to school librarian success. Modern technology's influence on changing the role of the school librarian is then described. The section then concludes with an analysis of the role of the librarian with regards to technology integration and their impact within the school community on both staff and students.

American Library Association and American Association of School Librarians Standards and Competencies for School Librarian Programs

Before individuals can acquire the title of "school librarian," they must obtain the appropriate professional degrees supported by both the American Library Association (ALA) and the American Association of School Librarians (AASL). The ALA is a nonprofit organization that endorses library education internationally, and the AASL is the only national membership organization that is focused on the professionalism of school librarians and the school library community (American Library Association [ALA], 2015a). While both organizations have established "school librarian" as the official professional title, "school library media specialist," "teacher librarian," "media

coordinator,” and “library information specialist” are all acceptable names for the profession (National Council for Accreditation of Teacher Education [NCATE], 2010).

According to the American Library Association, K–12 school librarians need a master’s degree as their first professional degree, but they may do so through one of two tracks. The first track is earning a master’s degree from a program accredited by the ALA, which can be pursued in colleges and universities across the United States, Canada, and Puerto Rico. Degree names include Master of Library Science (MLS), Master of Arts, Master of Librarianship, Master of Library and Information Studies (MLIS), and Master of Science (ALA, 2015a). The second track to receive a master’s degree for the school librarian profession is to earn a master’s degree with a specialty in school librarianship from a program recognized by the AASL in an educational unit accredited by the Council for the Accreditation of Educator Preparation (CAEP) (ALA, 2015a). In Delaware, certification requirements for School Library Media Specialists are included in Title 14, Chapter 15, Section 1580 of the Administrative Code (refer to Appendix D).

Standards and Competencies

According to the ALA/AASL Standards for Initial Preparation of School Librarians, there are five core competencies that all school librarians must meet. First, school librarians must teach for the ultimate purpose of learning, considering all students and other members of the learning community. Through this standard, candidates acknowledge and support students’ diverse learning styles and their physical and intellectual abilities and needs. They are educated on the stages of human growth and development, and they understand that various cultures can influence learning. Further, candidates exchange best practices of teaching and learning with other educators to instill collaborative partnerships on the principles of education. This standard also recognizes the importance of technology integration as a means of creative teaching for a diverse body of students (NCATE, 2010).

The second standard that school librarians must meet relates to the importance of reading and literacy. Through this standard, candidates develop collections of literature and select information materials, in print and electronic formats, suited for children and young adults based on varying reading levels and cultural, social, and linguistic needs. They support reading for personal growth, lifelong learning, and enjoyment through this competency (NCATE, 2010).

Information and knowledge form the basis of the third competency. School librarians must be knowledgeable of the various physical, digital, and virtual collections of resources and services that are made available to the diverse learning community (NCATE, 2010).

The fourth competency emphasizes advocacy and leadership. To maximize student learning and achievement, school librarians help facilitate the collaboration between teachers, administrators, librarians, and members of the community. Dynamic school library programs thrive as school librarians lead professional development workshops for others dedicated to the importance of education (NCATE, 2010).

Through program management and administration, which shape the fifth competency, school librarians are expected to plan, implement, and continuously evaluate school library programs and services according to the ethics and principles of their program mission (NCATE, 2010).

Enablers and Barriers to School Librarians' Success in Four Domains

Once school librarians earn the appropriate degree(s) and demonstrate a proficiency in meeting all five competencies, their success, or lack thereof, stems from a number of enablers and barriers. Lynn F. Zinn conducted extensive research on teacher leadership and published the findings through the American Educational Research Association in 1997. Based on Zinn's research, domains that impact librarians' achievement include social relationships, institutional structures, personal considerations and commitments, and intellectual and psychological characteristics (Johnston, 2012). Examples of enablers and barriers are detailed below in Table 1.

Table 1: Enablers and Barriers in Four Domains

Four Domains Impacting Librarians' Achievement		Examples of Enablers	Examples of Barriers
1.	People and Interpersonal Relationships	Maintaining personal support system at work	Lacking personal support system
		Having positive working relationships with school administrators, teachers, and principal	Lacking positive working relationships and lacking professional respect
2.	Institutional Structures	Receiving necessary resources, such as funding, personnel, time, and technology	Lacking resources, such as having insufficient time to complete tasks
		Understanding clearly defined role definitions	Lacking role definitions from broadly- and ill-defined leadership roles and responsibilities
3.	Personal Considerations and Commitments	Continuing good health and wellness	Having personal health issues
		Gaining support from family and friends	Lacking support from family and friends
4.	Intellectual and Psychological Characteristics	Possessing intellectual curiosity, enjoyment of learning, and professional growth	Lacking intellectual curiosity, enjoyment of learning, and professional growth
		Perceiving ability to make a difference in the lives of students and teachers	Having feelings of discouragement and frustration

Most Frequently Reported Enablers and Barriers

In 2009, The PALM Center conducted *The School Library Media Specialist and Technology Integration Survey* (Johnston, 2012). Through this study, school librarians identified which enablers most contributed to their successful careers. The highest ranking enabler identified, with a frequency of just over 9.5 percent was having a supportive principal (Johnston, 2012); among other things, librarians' positive relationship with their superior instills a sense of mutual trust, confidence, and motivation that generates high achievement in technology integration. In the same study 9.5 percent of participants stated that opportunities to gain a leadership role and assume more responsibilities led to their success. They mentioned that their role as a school librarian has become more fulfilling through both designing staff-development workshops and serving on leadership, technology, and curriculum committees in schools and at the district level (Johnston, 2012). According to the study, an equally important enabler for school librarians is the desire to make a difference for students and teachers (Johnston, 2012); when librarians embrace morally-based motivations to help others, they believe that they perform better in their designated role within their school communities. Other frequently reported enablers from the study include the following: professional development opportunities, sense of obligation to get involved, commitment to continual professional growth, expertise, collaborative teachers, professional organizations, and personal beliefs and values (Johnston, 2012).

In the same PALM Center study, school librarians identified the core barriers to their success. With a frequency of nearly 25.5 percent, time was the leading barrier identified (Johnston, 2012). Numerous school librarians felt that with more time they could better invest in their partnerships with other educators, enhance their relationships with students, implement more desired library programs, and become more knowledgeable on technology integration for teaching purposes. They reported that, since too much time is spent on shelving books, checking books in and out, and completing paperwork, there is not enough time to devote to more constructive tasks (Johnston, 2012). While opportunities to gain leadership and to undertake more responsibilities have jointly surfaced as an enabler, many school librarians also recognize the lack of these opportunities as a major barrier; they believe that exclusion from these enriching opportunities often hinders growth. "Unsupportive principal" was also identified as a barrier, which corresponds with the aforementioned enabler of a supportive principal (Johnston, 2012). Other key barriers that school librarians' mentioned included lack of funding, inadequate staffing, competitive instructional technologists, a climate of competition with the district technology department, technology resources, uncollaborative teachers, and a fixed schedule (Johnston, 2012).

Digital Age Shifts Librarians' Role

Technology, as a crucial element of teaching and learning, has significantly transformed education in the 21st century. Both in and outside of the classroom, students are able to utilize technology tools and resources to obtain information quickly, analyze and synthesize it, and then present it in a professional manner (Johnston, 2012). Once individuals in society understand how to use technology, they must then adopt a new mindset that supports technology's role in stimulating

more creativity and meaning in what is done (Kuhlthau, 2010). The changing information landscape has redefined the role of school librarians, giving them new opportunities for leadership; from the familiarity with electronic databases to the creation of presentations using PowerPoint, librarians have an enormous potential to lead in technology integration (Johnston, 2012).

Bringing tablet applications and e-books into a school library creates new roles for school librarians. First, it requires that librarians curate application offerings for elementary school students. Very few education apps are quality; apps need to be evaluated for user interfaces and other characteristics. Children may experience frustration and boredom unless the app is at the right level of difficulty (Neumann & Neumann, 2013).

E-book libraries also need to be carefully curated and organized. In addition to purchasing materials that are specifically needed for students in a particular school, libraries can expand the resources available to students by participating in cooperative purchasing agreements and consortia (American Association of School Librarians [AASL], 2013). Librarians also need to determine whether they will buy access to subscription services, and if so which ones will best fit their school's needs and budget. Importantly, school libraries should have a comprehensive and easy-to-use catalogue of resources. After all, spending on electronic resources is only justified if the resources are actually used by the students. Print materials and digital materials should be integrated in the catalogue so students can find the information they are looking for regardless of its format. To further encourage use of digital resources, libraries should make sure that student-owned devices are accepted on school networks so that library-owned digital resources can be viewed on whatever device a student prefers (AASL, 2013). In 2013–14, nearly 75 percent of school media centers reported that students accessed library e-books on student-owned devices (Sun, 2014).

Beyond providing digital resources, libraries should take responsibility for teaching students how to effectively use them. In addition to curating tablet applications in elementary schools, libraries need to provide scaffolding—encouragement for students to use apps correctly and creatively, and modeling their use (Neumann & Neumann, 2013). In libraries that provide e-books, librarians should help students with common challenges related to their use, including readability, highlighting, and accessibility. In a New York State survey, 74 percent of library media specialists provided guidance to students in the use of digital resources at least once per week (Gretes, 2013).

Ultimately, the role of a school librarian entails optimizing the advantages of e-books and tablet applications while mitigating their drawbacks through curating online resources and educating students on their use.

Librarians' Potential to Lead in Technology Integration

Within their school communities, school librarians play a pivotal role in helping to integrate technology into students' educational and professional development. Librarians' academic background and technological expertise give them great potential to lead. Best-practice library media programs thrive in schools where school librarians act as innovators, information agents, and technology integration leaders (Johnston, 2012). They have broad knowledge in locating and

evaluating information using extensive resources in the library, on the internet, in electronic databases, and in the community (Kuhlthau, 2010).

Research findings point to the role of the librarian as a technology leader in schools. Not only do school librarians directly impact students through their leadership, but they can also provide and support technology training for teachers, other colleagues, administrators, and parents; as leading technology facilitators, librarians can administer professional development in areas related to instructional and technology resources to the entire learning community (ISTE, n.d.). Technology in classrooms is only effective if teachers are well trained on its use. Librarians can actively coach teachers on how to use the technology in their classrooms and serve as a resource for any additional help that teachers may need (Digital Promise). As experts in technology, librarians can provide technical support for educational programs, IWBs, and special WiFi networks for student-owned devices in classrooms.

Furthermore, librarians can be resources for students using technology in the classroom and library. Responsibilities of the modern librarian often include teaching in-class lessons and teaching research skills directly to students (Digital Promise). Outside of formal class time, librarians should be available to help match students' needs and interests with appropriate resources (Rosen, 2014).

Having endless access to digital information resources for the whole learning community helps students to improve their learning and remain academically engaged (AASL, 2010). Teaching to reflect all ISTE NETS standards, which help to measure proficiency for technology's integration into education, school librarians can educate students on a wide-range of local, state, and national curriculum, technology standards, and information literacy (ISTE, n.d.). This education is meant to both develop information skills vital to using technology as a tool for current learning, while also helping students in the future "...to actively, safely, and ethically participate in the digital culture" (Johnston, 2012). As educators with a secure background in technology, school librarians have a responsibility to help prepare students as they move forward into their future careers.

Concerns with Technology Integration

Although school librarians have a unique potential to lead in technology integration, numerous educators and community members have unfortunately neglected to recognize this potential. School communities are not fully utilizing librarians in this capacity, and as a result librarians are unsure how to take on their new roles (Johnston, 2012). Many feel that they are too inexperienced in emerging technologies, such as social-networking sites, blogs, wikis, and podcasts, and that they must acquire the appropriate knowledge prior to integrating technology into their students' education. Further, according to the research of Hughes-Hassell and Hanson-Baldauf, when asked how they prefer to learn to use and apply technology tools, school librarians predominantly chose methods that indicated "self-motivation and a willingness to learn technology on their own time to develop their expertise" (Johnston, 2012, p. 22). If school librarians had more time to themselves, many of them would potentially take advantage of this self-educating approach.

Besides time, adequate *funding* is an essential enabler to school librarians' success. Funding in this area is used for hardware, software, subscription databases, online tools, and other digital

resources to support research and inquiry-based learning (ISTE, n.d.). To account for concerns related to purchasing e-content and technology, budgets and the processes used to develop them need to evolve to better support library technology. According to AASL, traditional purchase order procedures are outdated and not suited to digital purchases. Librarians need new processes to pay for digital library materials, such as e-books and subscription services. The process should be quick enough for librarians to keep constantly evolving digital resources up-to-date and flexible enough for librarians to buy new resources as they are developed. They also need continuous funding from schools to update digital content and technology (American Association of School Librarians, 2013). It is imperative that library budgets are prepared for the new costs of library technology and that schools plan for the changes in funding needs.

Further, there are concerns related to the scope of school librarians' technology integration involvement. Compared to leading in technology related activities within their school buildings, school librarians have admittedly reported much lower levels of such involvement in district-wide policymaking and information sharing with peers and community members (Johnston, 2012).

Impact Within the School Community

Although the current digital age presents novel leadership opportunities for school librarians, librarians must continue to also lead in the more traditional, non-technological capacities to achieve the fundamental mission and fulfill the role of school librarian. Within the school community, they can cooperate with parents and collaborate closely with teachers to design programs and construct an environment that is conducive to improved student learning outcomes. School librarians can also serve on school improvement, curriculum, and planning committees as instructional leaders (ISTE, n.d.). In some cases, they additionally serve on their schools' decision-making teams and share expertise by presenting at faculty, parent, and school board meetings (AASL, 2010). School librarians sometimes also supervise and evaluate their support staff, which may include educational assistants, computer education assistants, student assistants, and volunteers. Along with engaging in in-person communication, school librarians can also play a role in maintaining frequent communication to stakeholders through a school library website, parent newsletters, email exchanges, video/audio streaming and podcasts, and more (AASL, 2010).

Direct Influence on Students

Beyond the classroom, librarians help to empower students to become better critical thinkers, skillful researchers, ethical users of information, and enthusiastic readers (AASL, 2010). However, believing that school librarians play a trivial role in student achievement, several school districts have cut funding for non-classroom teaching positions (ISTE, n.d.). These decisions run counter to evidence indicating that certified school librarians and strong library programs enhance pre-K–12 students' success throughout their academic careers (ISTE, n.d.). For example, according to a 2011 study using data from the National Center for Education Statistics, "...states that gained librarians from 2004–2005 to 2008–2009—such as New Jersey, Tennessee and Wyoming—showed significantly greater improvements in fourth grade reading scores than states that lost librarians, like Arizona, Massachusetts, and Michigan" (Kachel, 2015).

State funding cuts, though, have heavily impacted librarians' presence in schools. Over a decade, Ohio has lost more than seven hundred school library positions, while California retains the worst ratio—1-to-7,000 librarians-to-students—of any state in the nation (Kachel, 2015). One main reason why states are choosing to dismiss librarians and school library programs is because they legally can. In some states, such as Pennsylvania, schools are not even required to have libraries. While libraries are required in prisons, barber and cosmetology schools, and nursing programs, they are optional in public schools (Kachel, 2015). Public schools have tight budgets and must face a tough academic decision and unfortunate tradeoff; they must decide whether they want to terminate the employment of teachers, who spend the majority of their time with students in the classroom, or the employment of librarians, who are often perceived to be support staff to the classroom teachers (Santos, 2011).

Although technological advancements have changed the landscape of public schools and school libraries, librarians still play a major role in both the digital and non-digital capacities. Through collection and maintenance of miscellaneous digital and printed materials and literature of various genres, librarians expose students to a diverse array of perspectives in a variety of topics across multiple disciplines. They instill in students the values of building on prior knowledge while also helping them to construct new knowledge (AASL, 2010).

According to the idea of guided inquiry, sometimes a third member, such as a teacher specializing in music, reading, or art, contributes to optimal student learning (Kuhlthau, 2010). The three-member core team composed of a classroom teacher, school librarian, and teacher specialist provide a synergetic approach to various areas of learning. When students learn about information literacy, social skills, curriculum content, literacy competence, and even the processes of learning through the collective effort of these educators, they absorb knowledge through a much more enriching learning experience (Kuhlthau, 2010). School librarians are core members of these teams. While they may lead particularly in areas of technology integration, librarians can also contribute significantly to the advancement of student educational achievement in non-technological capacities.

School librarians also have the responsibility to fully understand the copyright and licensing policies that protect intellectual property in the library (AASL, 2010). They must relay their knowledge of fair use to students so that they, too, can properly manage their use of both electronic and non-digital sources. Along with overseeing library resource use and management, in some cases, librarians can also supervise personnel and facilities for the development and implementation of library programs (AASL, 2010). These and other responsibilities help school librarians exercise effective management principles for students' best interests.

Summary of the Role and Impact of the School Librarian

In a variety of different capacities, school librarians positively impact students, teachers, and entire learning communities. Among other things, having a supportive principal enables the librarian to succeed in their roles. Having an insufficient amount of time to implement effective library programming is often considered to be the leading barrier to success. The adoption of e-books,

databases, tablet applications, and other innovative classroom technologies have created new roles for librarians to fulfill. However, with sufficient resources, librarians can succeed in both technology integration and in practicing more traditional librarian roles. Schools that choose to cut funding from libraries, whether by choice or due to tight financial constraints, unfortunately dismiss many of the opportunities for student academic growth. The role of the school librarian is of the utmost importance, and it should not be overlooked.

School and Public Library Partnerships

The current economic climate, and corresponding budget shortfalls, threatens collections, staff, and programming in all libraries. Increasing the collaboration between school and public libraries can lead to enhanced student and community learning outcomes. Despite serving similar populations, historically, public and school libraries have operated as separate entities. Some of the trends still remain true today. A 2012 survey of 559 public librarians conducted by the School Library Journal found that only 30 percent of respondents collaborated with “local schools to coordinate book purchases to support the curriculum” and only 9 percent “worked directly with school librarians and teachers” on homework assignments (Girmscheid and Miller, 2012). Emphasis on collaboration exemplifies the evolution of school curriculum reform and librarianship. In an information-rich society, improved collaboration will greatly enhance the quality of education and services offered to the community at-large.

Developing Partnerships

Collaborative relationships do not develop overnight. The development of sustainable partnerships relies on the capabilities of libraries to serve as centers for intergenerational learning for families residing in local and neighboring communities. Initiating contact can be as simple as a school librarian stopping into a public library and formally meeting the staff there before administratively seeking a formal partnership. As illustrated in Natalie Ziarnik’s book *School and Public Libraries: Developing a Natural Alliance*, the section to follow lays out foundational guidelines that can assist in launching a productive and collaborative partnership. Ziarnik’s work identifies three key principles that school librarians can utilize to bridge the public- and school-library divide:

Table 2: Three Key Principles to Bridging the Public- and School-Library Divide

Arranging a Visit	Sustaining the Connection	Continuing Contact
Create a list of potential attendees/collaborators.	Become acquainted with each colleague's schedule.	Establish a monthly newsletter of relevant resources and ongoing institutional events.
Find a time that is convenient for both school and public librarians.	Consider which parts of the collaborative effort will make efficient use of resources and expertise.	Maintain regular interaction to ensure better service for students.
Distribute packets of information regarding your library or school.	Be practical and maintain level expectations. Collaborative efforts should fit within the missions of involved institutions.	Establish summer reading programs to keep the school and public library connected throughout the summer.
During the visit, offer an informal tour of your facility.		

Source: Ziarnik, N. (2003). *School and Public Libraries: Developing the Natural Alliance*. American Library Associations. Chicago, IL

Successful communicative outreach efforts assist in establishing productive relationships. Taking an informal approach, school librarians should discuss the anticipated benefits of established partnerships with administration before contacting potential collaborators. Additionally, identifying a point of contact, understanding the target population, and outlining potential collaborative areas should be explored prior to this engagement. Recognizing the population these institutions serve and the services they offer helps in the construction of a formal relationship. Initiating contact can take place through a number of different avenues (email, telephone, physical visits) depending on the public librarian's availability. Emails detailing current endeavors, upcoming events, and other initiatives establish a formal communication trail. Information gleaned from received notifications may spark future interest in collaborative opportunities. From the public library's perspective, internal consultation among staff regarding services currently provided to local schools can clarify areas where additional support efforts can be directed.

Managing Partnerships

Public and school library partnerships play an integral role in addressing the needs of all student learners. While preliminary outreach measures were identified in the previous section, small initial collaborative partnerships can help in "establishing a basic cooperative relationship between school and public libraries" (Squires, 2009). Taking on substantial projects in the early stages of the partnership can lead to disastrous results, but establishing an on-going and consistent dialogue between libraries can accomplish noteworthy projects with minimal effort. This shared-approach to education between school and public libraries reallocates resources to complement students' curriculum and literacy needs.

The development of sustainable collaborative efforts is dependent on the promotion of available library resources. Public and school libraries should periodically share information regarding upcoming events, programs, and services in an effort to identify areas where collaboration can be beneficial. Through the posting of informative flyers in local schools, advertisement of monthly events, or development of an internal newsletter, students and families can be provided the opportunity to learn more about daily library happenings. Although the overall success of events can be hard to predict, school libraries can incentivize participation in joint-ventures by offering extra credit for a particular assignment.

Coordinating school curriculum with library programs can provide additional support for students through the utilization of available resources. As noted by Linda Wunderlin, media specialist at New Haven Middle School in Indiana:

When we have a project topic going on, I send an email to my contact at the local public library. She puts together a collection, so that when the kids come looking, they are directed to the already pulled collection. (Squires, 2009)

Providing the public library with adequate time to align, plan, and promote events to the larger community is vital in the success of collaborative initiatives. Similarly, establishing a homework club within the local library can provide an encouraging space for learning. Examples such as the Tall Tree Initiative in Westchester County, N.Y., where students received homework assistance from teachers employed part-time by the library, enriches the educational learning environment for children (Rosenberg, 1998). Areas facing budget constraints can actively recruit community volunteers and support to carry out similar efforts.

Resource Sharing

Librarians maintain a significant role in successful resource sharing between public and school libraries. Resource sharing, as described by Allen Kent, entails:

A mode of operation whereby library functions are shared in common by a number of libraries. The goals are to provide a positive net effect: (a) on the library user in terms of access to more materials or services, and/or (b) on the library budget in terms of cost, or much more services at less cost than if undertaken individually. (Kent, 1978)

More recently, the availability of data in the “Information Revolution” has forced libraries to undertake innovative strategies aimed at increasing the access students have to a variety of databases and online resources. Established through a consortium of networks, resource sharing centralizes the location and availability of literature materials by reducing communication gaps between libraries and costs by increasing purchasing power. Resource sharing services, which include the Interlibrary Loan (ILL), book exchanges, and online shared-catalog, allow for the physical and virtual sharing of requested materials.

Continuously developing ways to better serve their audience, such initiatives provide an “Easy way to expand the resources of the school library media center with little effort, and increase circulation of the public library’s collection” (Fitzgibbons, 2000). Moreover, technological advancements have

expanded library networks beyond the walls that previously confined them. Rural areas, with limited access to public library branches, are now able to utilize online databases, catalogues, and e-collections through the virtual linkage of public and collegiate library institutions. Libraries now possess access to more resources than previously available, while minimizing the information cost associated with delivery of library services in preparation of forecasted budget constraints.

Collaboration in Practice: Denver Public Library and the Denver Public Schools

Collaboration assists in both helping expand the types of programs libraries provide and modernizing their available collections. Collaborative efforts to enhance the district-wide educational goals between the Denver Public Library (DPL) and the Denver Public Schools (DPS) officially began with the attainment of a \$262,306 Library Services and Technology Act (LSTA) grant in 2007 (Colorado State Library, 2007). During a two-year period, school librarians, media specialists, and teachers “formed professional learning communities” to better inform and share their insight regarding how to better serve the needs of their students (Colorado State Library, 2007). Recognizing that 34 percent of Denver’s K–12 students are English language learners, school libraries partnered with local nonprofits to ensure that young children could have access to a number of culturally relevant experiences by providing free admission to venues such as the Denver Botanical Gardens and the Colorado Ballet (Murvosh, 2013). In addition, this collaboration led to the creation of the My Denver Card, in cooperation with United Healthcare, which serves as both a library card and recreation pass to a number of ongoing events year-round (City and County of Denver, 2015). Despite the grants conclusion in 2009, the city has continued to support similar initiatives.

Limitless Libraries: The Nashville Public Library and Metro Nashville Public Schools

Looking for ways to better leverage the city’s resources, Nashville Mayor Karl Dean recommended a formal partnership between the Nashville Public Library (NPL) and Metro Nashville Public Schools (MNPS) called Limitless Libraries. The collaborative program, established in 2009, has “helped modernize and expand school collections by weeding out outdated books and by using the city’s purchasing power to efficiently acquire new material” (Bengel, 2013). Today, Limitless Libraries serves 81,000 public students throughout all 128 MNPS schools. NPL and MNPS work together in coordinating book purchases, assessing current collections, and alleviating the digital divide, in an area where 90 percent of the district’s students are eligible for free and reduced price lunch.

A report commissioned by the State of Tennessee to analyze how students use and benefit from Limitless Libraries produced the following findings (Lance, Rodney, and Schwarz, 2013):

- Since the implementation of Limitless Libraries, circulation at the schools has increased 79 percent.
- Today, there are 28,007 Registered Limitless Libraries Users, of which, nearly 43 percent of those students had never had a library card before.

- Users were more likely than non-users to be successful in meeting the state’s tested academic standards.

The program also led to nearly \$271,000 in estimated savings due to discounts negotiated with vendors (Urban Libraries Council, 2016). Such findings confirm the importance of collaborative initiatives in both expanding access and increasing the utilization of library resources. The success of Limitless Library participants in meeting the state academic standards by increasing the number of quality items per student signifies the usefulness of dynamic partnerships (Bengel, 2014).

Summary of Developing and Managing Partnerships

This section outlined the tools needed to create, develop, and maintain partnerships between school and public libraries. Collaboration can only occur when both parties see the value in working together to achieve a common goal. Crafting timelines to carry out such initiatives will assist in achieving desired outcomes. Recognizing the potential challenges in increasing cooperative efforts, an internal discussion with school administration and leadership should be conducted prior to formally engaging with potential collaborators. School and public libraries must realize that they are not competitors, but rather, members of the same team. Establishing a mutually beneficial partnership can significantly improve the effectiveness with which students are served—leading to improved learning outcomes (Ziarnik, 2003).

Conclusion

In closing, the research provided conveys a compelling argument of the positive impact that quality school libraries and certified librarians can have on student learning outcomes. This literature review includes a comprehensive examination of the characteristics of quality school libraries and how they impact student performance; the role of the school librarian; library technology; and the development of partnerships between school and public libraries. As the research has shown, improved learning outcomes from students can only be realized if adequate support is provided to school libraries. Providing this support gives students access to an infinite amount of information, along with the guidance and encouragement of trained school librarians.

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Appendix B: Delaware School Library Study Survey

Delaware School Library Study Survey 2015

Please select your school district.

Value	Percent	Count
Appoquinimink	10.0%	7
Brandywine	10.0%	7
Caesar Rodney	4.3%	3
Cape Henlopen	2.9%	2
Capital	5.7%	4
Christina	8.6%	6
Colonial	4.3%	3
Delmar	1.4%	1
Indian River	5.7%	4
Lake Forest	2.9%	2
Laurel	2.9%	2
Milford	4.3%	3
NCC Votech	4.3%	3
POLYTECH	1.4%	1
Red Clay	12.9%	9
Seaford	2.9%	2
Smyrna	2.9%	2
Sussex Tech	1.4%	1
Woodbridge	2.9%	2
Charter Schools	8.6%	6
Total		70

If you selected "Charter School" or "Other," please specify.

Response	Count
Academy of Dover Charter	1
Campus Community Charter School	1
Charter School	1
MOT Charter	1
Odyssey Charter School	1
Sussex Academy	1
Total	6

Please indicate the library/school library media center in which you work.

Response	Count
Alexis I. duPont High School	1
Alfred G. Waters Middle	1
Appoquinimink High School	1
Bayard Middle School	1
Brandywine High School	1
Brick Mill Elementary	1
Bunker Hill Elementary	1
Cab Calloway School of the Arts	1
Conrad Schools of Science	1
Delcastle Vocational-Technical High School	2
Delmar Middle and Senior High Schools	1
Do not - am the head of school - do not have Library/Information but getting ready to hire	1
Fairview Elementary	1
First State Montessori Academy Charter School	1
Georgetown Elementary	1
Georgetown Middle School	1
Gunning Bedford Middle School	1
H.B. duPont Middle School	2
Hanby Elementary	1
Heritage Elementary	1
Indian River High School	1
John Bassett Moore	1
Jones Elementary School	1
Kathleen H. Wilbur Elementary	1
Lake Forest High School	1
Lancashire Elementary	1
Lewis Elementary	1
Lombardy Elementary School Library	1
Lord Baltimore Elementary	1
MOT Charter	1
May B. Leasure Elementary School	1
Milford Central Academy	2
Milton Elementary	1
Misphillion Elementary	1

Response	Count
Mount Pleasant High School	1
Nellie Stokes Elementary School	1
Newark High School	1
North Dover Elementary School	1
North Laurel Elementary	2
Odyssey Charter School	1
Old State Elementary	1
Polytech High School	1
Postlethwait Middle School	1
Richardson Park Elementary	1
Robert S. Gallaher Elementary School	1
Seaford Middle School	1
Silver Lake Elementary	2
Smyrna Middle School	1
Springer Middle School	1
St Georges Technical High School	1
Talley Middle School	1
WB Simpson	1
West Seaford Elementary School	1
WT Chipman Middle School	1
Welch Elementary	1
William Henry Middle School	1
William Penn High School	1
Woodbridge High School	2
Brandywine Springs Elementary School	1
Downes Elementary School	1
Shue-Medill Middle School	1
Total	67

Please enter the name(s) of any additional schools in which you work in a library capacity.

Response	Count
Clayton Intermediate School	1
Dunbar Elementary	1
The Charter School of Wilmington (housed in the same building as Cab Calloway)	1
Total	3

Please indicate the grade levels served by the library/media center in which you work.

Response	Count
Pre-Kindergarten – 5	1
Kindergarten – 4	2
Kindergarten – 5	15
Kindergarten – 6	1
Kindergarten – 8	4
1 – 5	9
2 – 4	2
5 – 6	2
5 – 8	1
5 – 12	1
6 – 8	13
6 – 12	3
7 – 8	1
9 – 12	13
9 – 12 & Life Skills	1
Total	69

Please indicate the grade levels served by the libraries/media centers in the additional school or schools in which you work in a library capacity.

Response	Count
5 – 6	1
9 – 12	2
K – 1	2
Total	5

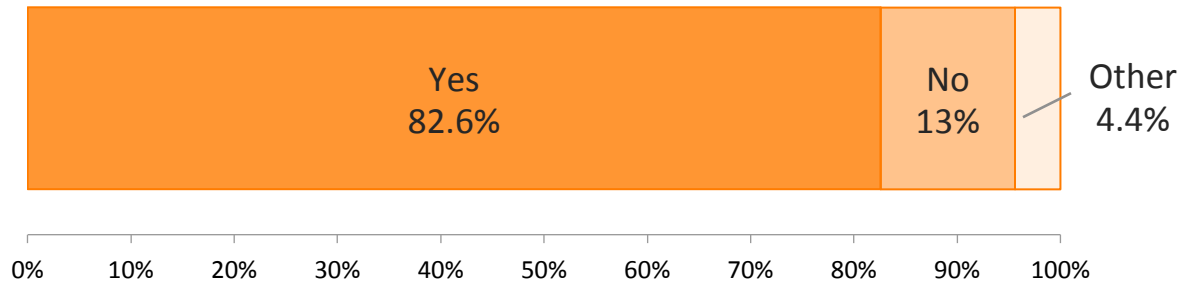
Please indicate your job title.

Response	Count
CTE Teacher, Media Specialist	1
Elementary School Librarian	1
Head of School	3
Librarian	22
Librarian (Secondary)	1
Librarian/Media Specialist	1
Librarian/Technology Educator	1
Librarian/Technology Teacher and Gifted and Talented Teacher	1
Library Manager	1
Library Media Specialist	18
Library Media Specialist/Special Ed Teacher	1
Library Media Specialist/Technology Teacher	1
Library/Information Specialist	1
Para-Professional	1
Para-Librarian	3
School Librarian	6
School Librarian/ Content Chair of Library/ Media Christina School District	1
School Library Media Specialist	2
Secondary Librarian	1
Technology/Library Teacher	1
Total	68

Please indicate your educational background by checking all levels of education you have completed.

Value	Percent	Count
Associate Degree	4.4%	3
Bachelor's Degree	50.0%	34
Master's Degree	88.2%	60
Doctorate	5.9%	4
Other graduate level study	30.9%	21
Total		68

Are you a certified school librarian in the State of Delaware?

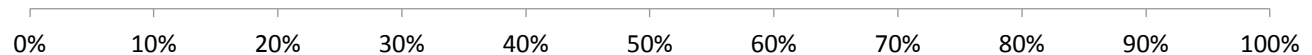
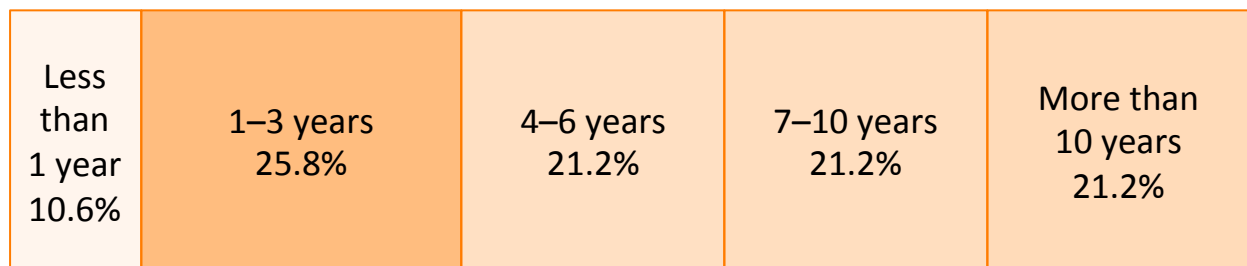


Value	Percent	Count
Yes	82.6%	57
No	13.0%	9
Other	4.4%	3
Total		69

If you answered "Other" above, please specify in the text box provided below.

Response	Count
Currently pursuing degree in LMS	1
I have completed my coursework and the transcript and other materials are being submitted to DOE and District	1
Certified in NJ; DE cert expired in 2014. I retired in 2012 and didn't think I would be needing certification renewal.	1
Total	3

How long have you been working at this library/ media center?



Value	Percent	Count
Less than 1 year	10.6%	7
1-3 years	25.8%	17
4-6 years	21.2%	14
7-10 years	21.2%	14
More than 10 years	21.2%	14
Total		66

Do you have other instructional and/or staffing responsibilities beyond those directly associated with your job duties in the library/media center?



Value	Percent	Count
Yes	60.9%	39
No	39.1%	25
Total		64

If "Yes," please specify other duties/responsibilities.

Response	Count
Cover students in RTI groups and for teachers meeting in PLC groups.	1
Full-time CTE teacher. Library responsibilities are handled mostly as EPER.	1
Homework Club, Lunch Duty, Dismissal Duty	1
I am assigned four 90-minute Independent Study classes every day.	1
I am responsible for four 90-minute independent study classes.	1
I teach skills to 10th graders	1
Lobby duty, lunch duty, plc coverage, classroom coverage, substitute	1
Lunch duty, bus duty	1
Morning announcements, recess duty, materials management	1
Morning bus duties and walk kids to their parents at pick up.	1
PLC coverage. AM Car rider/walker duty PM	1
School Test Coordinator	1
Special Education teacher	1
Starting next school year 2015-2016, first period everyday teach research skills class.	1
State Testing Administrator	1
We have no library media center	1
Will be teaching some classes	1
Yearbook, Data PLC's	1
Act as substitute when school can't fill all positions.	1
Test administrator	1
Co-Technology Coordinator, PBS Committee, lunch duty hallway duty, bus duty, student mentor, technology trainer	1
Covering PLC times for teachers without having access to those meetings. Seven lunch duties at one school and one at the other. Bus duty, breakfast duty twice at one school.	1
I am the building technologist for my school, I am the district content chair of library/media for the District and I do afternoon pick up duty every day for our students.	1
Teach library science classes daily, cafeteria duty daily, morning and afternoon duties, schedule and maintain four laptop carts and three iPad carts, schedule three computer labs, teach three RTI reading classes per week, teach two "activity periods" per week. Next year I am scheduled with a full teaching load (6 classes per day) in addition to the responsibilities listed above.	1
I teach five 6th grade library/research classes each day. We are on an A/B schedule, giving me a total of 10 graded classes.	1
Cafeteria Duty during open block each week Bus Duty every day at whichever school I am assigned. Year Book PBS Team Wellness Team	1
I substitute for the front office secretary when she is out and I have been asked to cover/sub in classrooms	1
Coverage for Professional Learning Communities 6 class periods for week that are additional to the regularly scheduled library visits for each class in each grade (30 classes)	1

Response	Count
Scorekeeper & Field Judge for Basketball and Track/Field Events, Teach Economics in Adult Ed Dept., X Sch. Dist. - 9th year Also, DE Certified in: Social Studies (6-12) - Highly Qualified (PRAXIS II - ranked top 15% in U.S.) English (6-12) - Highly Qualified Librarian/Media Specialist - (K-12) - Highly Qualified	1
Each year my additional duties vary depending upon the needs of the school. This year I was scheduled to cover a class for 90 minutes of PLC time once per week.	1
I make sure that the students complete their Career Cruising Student Success plan. I schedule all the computer labs.	1
We currently have a volunteer librarian as the funds are not available to hire a full time library/media specialist this year.	1
Coverage for teachers for meetings, before and after school duties, webpage maintenance, Leadership Team, District Technology and Innovation Team	1
Teacher of gifted pull-out program (grades 3-4, 3 hours per week) Screening for gifted program (primarily 2nd grade, during library instructional time) Teacher of technology classes (grades K-4, 9 classes or 13.75 hours per week) Breakfast duty each morning	1
I am also the gifted and talented teacher as well as the technology teacher. Other duties include hallway duty, breakfast duty, morning gym duty	1
Administer Accelerated Reader program by monitoring student goals and growth and provide incentives for those who meet goals. Morning and Afternoon Announcements. Arrival duty daily, lunch duty weekly. School-wide reading challenges with rewards to encourage literacy. Guys Read initiative to increase male reading. Provide reading and math intervention to grades 2 and 5. Host author visits	1
I also manage technology instruction and inventory, which some would argue is part of being a school librarian.	1
Supervising keyboarding classes, turning on computer in labs not attached to the library, covering teachers' classes daily so they can attend grade level meetings	1
College and Career - set up all college visits to school, in charge of the website and for disseminating information about college visits, summer programs, and scholarships. Test Coordinator for the building, in charge of setting up all testing schedules, security, teacher trainings, and making sure all students complete the required tests. The tests include STAR ELA & Math, Smarter ELA and Math, DCAS Science, EOC US History, and Alt DCAS. District administrator for Follett Destiny Library System Building administrator for iSafe Internet Safety Program	1
Teaching remedial reading and for next year also teaching multiple levels of creative writing. this change happened this year (getting a couple classes) and next year my schedule will be split even more with half library/half ELA.	1
Maintaining/delivering laptop carts Lunch duty daily Morning and afternoon hall duty Clothes closet duty Scheduling school computer labs (3) and laptop carts (3) 5 "Activity Blocks" per week - 3 RTI blocks	1
Total	41

With how many school faculty do you work directly in an average day?

Response	Count
0	2
1	4
2	3
3	1
4	1
5	16
6	3
8	3
10	8
12	3
15	3
20	5
25	1
30	1
40	4
50	3
120	1
Total	62

Librarian/Faculty Interaction

Mean Number of Daily Interactions with Other Faculty	14.33 per day
Median Number of Daily Interactions with Other Faculty	8.00 per day

In what capacity or capacities do you typically work with faculty? (Please check all that apply.)

Value	Percent	Count
Identifying existing resources (already owned/licensed) that support the curriculum	89.4%	59
Identifying new resources (not already owned/licensed) that support the curriculum	68.2%	45
Helping faculty improve their searching/research skills	51.5%	34
Planning other services/initiatives that enhance student learning	78.8%	52
Other (Please specify.)	37.9%	25
Total		66

If you answered "other" above, please specify in the text box provided below.

Response	Count
Assisting other teachers with students	1
Assisting with technology, testing, planning, software, etc.	1
Co-teaching; Help with technology issues, textbook issues, a plethora of other questions	1
Collaborative research projects, book clubs	1
Handle all the technology, laminating.	1
Help faculty complete professional development assigned by the district.	1
I cover Teacher prep periods with a fixed schedule	1
I don't work with other faculty members	1
Life Skills class weekly.	1
Planning and implementing curriculum such as research projects and literature circles.	1
Planning instructional units aligned to the CCSS	1
Teach information literacy skills and critical inquiry	1
Team Teaching in the classroom.	1
Technology support	1
Troubleshooting technology issues. Supporting integration of technology and instruction.	1
Planning instructional activities for staff.	1
Scheduling labs/carts technology trouble shooting co-teaching	1
Checking books in and out for their classes, gathering books on subjects they are working on, going to the public library (close by) to pick up and return books I have gotten for them from that library	1
As Testing Coordinator since Spring break I deal with a minimum of 25 faculty a day for testing issues. In the Fall with college visits, usually 18 a day.	1
I cover classroom teachers' planning periods. I am one of the 5 "special classes" in our elementary schools.	1
Collaborating on lessons to ensure meaningfulness and relevancy to students Administering STAR/AR passwords, reports, etc. Registering faculty for Ebook subscription	1
I collaborate with teachers and co-teach with them on lessons. I also teach a lot of technology to both students and teachers.	1
Helping with printers and tech they can't figure out helping with testing or test administration	1
I work with the teacher and students who come into the library on a daily basis. The teacher varies from day to day.	1
Hall Monitors, Community Mentors, ADM Staff. Delivering book cart services. Coaching Staff, Custodians	1

Response	Count
I am the one they call on if their classroom computers are not working, I take care of Smart Board problems, I am a building hugger (students at risk earn bonus time with me if they have had a good day), I help prepare student laptops for state testing and repair laptops, I maintain the building humor wall, fix the laminator when it jams, and I am a building mentor for first year teachers if they have questions or problems.	1
Total	26

With how many students do you work directly in an average day?

Response	Count
30	1
40	1
50	3
60	1
65	2
70	3
75	1
90	1
95	1
100	13
105	1
120	1
125	4
130	1
140	1
150	8
165	1
180	1
190	1
200	7
205	1
250	3
300	2
350	1
1000	1
Total	61

Librarian/Student Interaction

Mean Number of Daily Interactions with Students	151 per day
Median Number of Daily Interactions with Students	125 per day

In what capacity or capacities do you typically work with students? (Please check all that apply.)

Value	Percent	Count
Assisting students in using online resources	84.9%	56
Assisting students in using print materials	80.3%	53
Teaching information literacy skills	75.8%	50
Teaching basic library and/or research skills	83.3%	55
Checking physical materials in and out	95.5%	63
Other (Please specify.)	33.3%	22
Total		66

If you answered "other" above, please specify in the text box provided below.

Response	Count
Assist students in finding appropriate books to read for pleasure	1
Assisting them with problems with PowerPoint, Word, Prezi, Google Docs, and printing.	1
Bibliotherapist, maker space overseer, therapist/friend, etc.	1
Encouraging a love of learning and literature	1
Help with word processing and printing	1
Helping with student publishing/printing; photography for school needs; yearbook interviews	1
I help student in a wide variety of ways. I teach a lot of technology skills.	1
PAWS and book club (literacy) and printing/proofreading	1
Reader's Advisory Supervising student library aides	1
Teaching a class.	1
Technology and typing skills.	1
Assisting student with research skills	1
Completing projects, printing. job or career searches, college prep. personal needs.	1
Coverage of regular classrooms	1
Lunch group in my room, RTI,	1
Research projects that are designed in conjunction to the curriculum	1
Teaching reading RTI or activity periods lunch groups	1
Teaching technology skills - using Word and Excel, how to set up email, saving and finding documents, editing papers, listening to students in a counseling capacity, college and career guidance	1

Response	Count
Assist Hall Monitor during Class Transitions & Arrival/Dismissal EPER with Basketball & Track/Field Events Occasionally Cover a Class for Short Time	1
Technology issues, publishing of work, Reader's Advisory, answering questions pertaining to EVERYTHING	1
I have an open library program in the morning before classes start, I see students during after school pick up time, and I help out with students at high risk in my building. I also teach a locked schedule of 6 each day.	1
Teaching students to use technology; Assisting students in using technology; Assisting students in English Language arts skills; Assisting students in re-shelving books;	1
I spend time with students doing special projects. I also have a school garden that I organized and care for with students. I spend mentoring time with students and eat lunch with students at least 2-3 times a week. I organized an opportunity for the 4th and 5th graders to read to kindergarten students. I ran a read-a-thon and raised money for Heifer International. I give away RIF books 3 times a year. I organized a month worth of activities for I Love-to-Read Month including special guest authors to talk to the students about the writing, publishing and illustrating aspects of writing books. I had the New Castle County Library in talking to parents and students about the Summer Reading program and giving them Library Card Applications. I organized and help 80 families in need at Christmas.	1
Assisting with book selection, helping them with their performance and choices for their reading program component of their ELA grade.	1
Total	24

How many certified library media specialists are employed in the library/media center in which you work?

Response	Count
0	11
1	54
2	1
Total	66

What is the total number of hours per week (during the school year) worked by certified library/media specialists in the library/ media center in which you work?

Response	Count
0	8
7.5	3
20	1
22	1
32	1

Response	Count
35	8
37	2
37.5	12
40	24
42	1
43	1
45	1
45-55	1
50	1
Total	65

How many other paid staff members are employed in the library/media center in which you work?

Response	Count
0	58
.5	1
1	8
3	1
Total	68

What is the total number of hours per week (during the school year) worked by other staff members in the library/ media center in which you work?

Response	Count
0	47
2	1
20	1
30	2
35	1
36	1
37.5	2
40	2
60	1
Total	58

Approximately how many physical items (books and media/non-print) are in the collection of the library/ media center in which you work?

Response	Count
1,500	1
2,000	3
4,000	1
5,400	1
6,000	1
6,500	1
6,700	1
8,000	2
8,150	1
8,500	1
9,000	1
9,600	1
9,800	1
9,874	1
10,000	5
10,100	1
10,734	1
11,000	3
11,641	1
12,000	3
12,267	1
12,400	1
12,500	2
13,000	5
14,000	3
14,500	1
14,537	1
15,000	5
16,000	3
16,500	1
16,503	1
17,000	2

Response	Count
20,000	3
20,716	1
21,000	1
25,000	1
29,000	1
40,000	1
45,000	1
Total	66

Collection Size

Mean Collection Size	13,256
Median Collection Size	12,450

Approximately how many new items were added to the collection of the library/ media center in which you work during the past academic year?

Response	Count
0	2
25	1
50	1
60	1
75	1
80	1
100	7
110	1
150	2
180	1
200	5
207	1
225	1
250	4
300	6
350	1
400	4
420	1

Response	Count
450	1
500	10
525	1
600	2
700	2
800	1
1,000	2
1,182	1
1,200	2
1,223	1
2,000	1
4,000	1
Total	66

Items Added Previous Year

Mean Number of Items Added	460
Median Number of Items Added	300

Excluding gifts and other donations through parents' organizations and promotions, how much was allocated for the purchase of new materials for the collection of the library/ media center in which you work during the past academic year?

Response	Count
\$ 0	6
\$ 2	1
\$ 300	1
\$ 1,000	3
\$ 1,200	2
\$ 1,350	1
\$ 1,500	3
\$ 1,675	1
\$ 1,763	1
\$ 2,000	8
\$ 2,200	1
\$ 2,500	2

\$ 3,000	4
\$ 3,428	1
\$ 3,500	2
\$ 3,632	1
\$ 4,000	2
\$ 5,000	2
\$ 5,500	1
\$ 6,000	3
\$ 6,200	1
\$ 6,500	1
\$ 7,000	1
\$ 8,000	4
\$ 8,321	1
\$ 9,000	1
\$ 9,200	1
\$ 10,000	3
\$ 16,000	2
\$ 24,400	1
\$ 25,000	1
Total	63

Budgeted Allocation For New Library Materials

Mean Budgeted Amount for New Materials	\$ 4,688
Median Budgeted Amount for New Materials	\$ 3,000

How many Internet accessible computers are available for student use in the library/ media center in which you work?

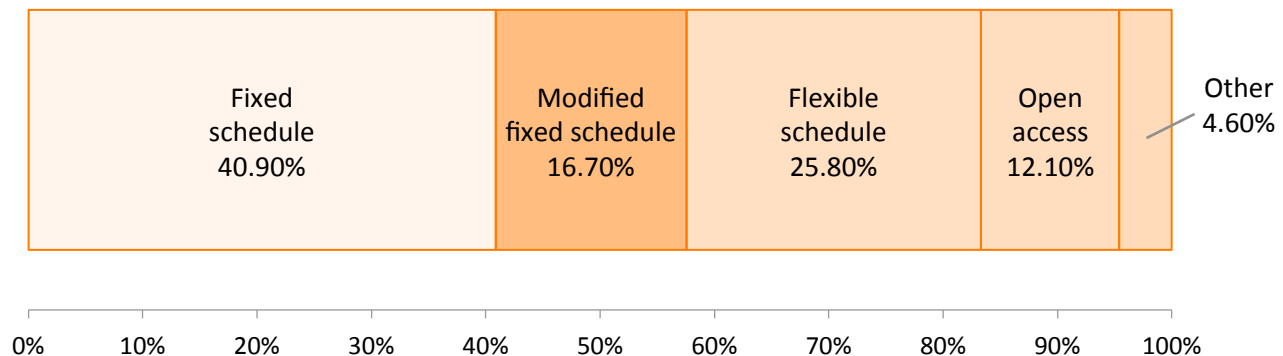
Response	Count
0	1
1	1
10	1
11	2
12	5
13	1
14	2
16	2

Response	Count
18	1
2	2
20	1
220	1
23	1
24	1
25	1
26	1
28	1
3	1
30	9
32	4
33	1
34	1
35	1
4	5
5	2
54	1
55	1
58	1
59	1
6	7
64	1
8	3
87	1
9	1
90	1
Total	67

Is Wi-Fi available to students in the library/ media center in which you work?

Value	Percent	Count
Yes	64.7%	44
No	35.3%	24
Total		68

Which of the following best describes library/ media center availability for student use with library/ media center staff present?



Value	Percent	Count
Fixed schedule (classes at regularly scheduled times)	40.9%	27
Modified fixed schedule which provides some open access in addition to classes	16.7%	11
Open access throughout the school day (flexible schedule)	25.8%	17
Open access including extended hours outside of the school day	12.1%	8
Other (Please specify.)	4.6%	3
Total		66

If you answered "other" above, please specify in the text box provided below.

Response	Count
Except during testing - then fixed	1
Extended hours as requested by students, by appointment	1
Open access except when we are testing	1
By appointment: (w/teacher) class visits, (w/o teacher) small groups; individuals with pass from teacher.	1
My schedule is mostly flexible, however I am scheduled for one 90-minute session once per week to cover teacher's PLC time.	1

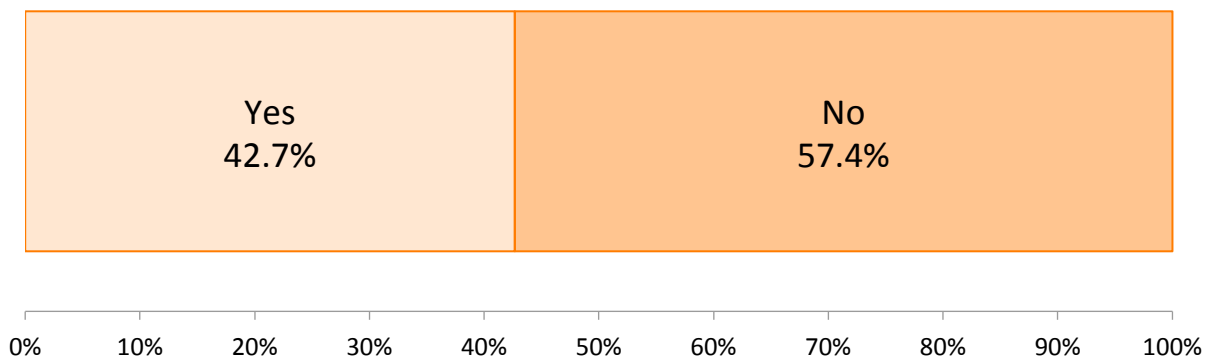
Are the holdings of the library/ media center in which you work represented in an automated catalog available outside the school building?

Value	Percent	Count
Yes	80.9%	55
No	19.1%	13
Total		68

Are the materials in the library/ media center in which you work shared between/among other libraries/ media centers within your school district?

Value	Percent	Count
Yes	70.6%	48
No	29.4%	20
Total		68

Have you collaborated with public libraries in your area in the past?



Value	Percent	Count
Yes	42.7%	29
No	57.4%	39
Total		68

If you answered "Yes" above, in which of the following ways have you collaborated?

Value	Percent	Count
Technology and computer education	10.5%	4
Social sciences	0.0%	0
Language education	5.3%	2
STEM/ STEAM programs	5.3%	2
Literacy and reading programs	68.4%	26
Arts and recreation programs	2.6%	1
History and geography related education	0.0%	0
Financial education	0.0%	0
Other (Please specify.)	13.2%	5
We have NOT worked with public libraries in the past	21.1%	8
Total		38

If you answered "other" above, please specify in the text box provided below.

Response	Count
Book donations to our Library - referrals by our Library to NCC Libraries	1
Representative at our book fair family night; info. on summer reading program	1
Sharing information on programs and summer reading	1
Borrowing books from them	1
Field trip to the public library	1
We have asked public libraries to come to our family events to issue library cards and/or information	1
Total	6

Appendix C: Interview Questions

Delaware School Libraries Master Plan Interview Questions for Building Level Administrators (Principals, Assistant Principals, etc.)

Welcome and Introductions

- Participants and facilitators
- Thank the participants for their willingness to come
- Any administrative details

Purpose of the Focus Group

You are being invited to participate in a research project that will assist in the creation of a master plan for Delaware school libraries. The purpose of this study is to gather information about school libraries from school administrators to help inform the creation of master plan for Delaware school libraries. This plan will create a vision that will inform solutions for the development of state-of-the-art school libraries in Delaware. This work is being done with the Delaware School Libraries Council, with support from the Delaware Department of State and the Department of Education. You will be one of approximately 100 participants.

There are no risks to your participation and there may be no direct benefit to you. However, your participation is an opportunity to share your experiences, beliefs, and opinions. Furthermore, your participation will enable us to better understand the role of school libraries.

We will take special steps to protect your privacy. Your responses will be accessible only to the researcher team on this project. After the interview, identifying information (names, schools) will be removed to ensure your participation will remain confidential. All data will be stored in a password protected folder encrypted files and/or in locked filing cabinet. The stored data will be destroyed three years after the conclusion of the project. The research team will make every effort to keep all research records that identify you confidential. The findings of this research may be presented or published. If this happens, no information that gives your name or other details will be shared.

Taking part in this research study is entirely voluntary. You do not have to participate in this research. If you choose to take part, you have the right to stop at any time. If you decide not to participate or if you decide to stop taking part in the research at a later date, there will be no penalty or loss of benefits to which you are otherwise entitled. Your decision to stop participation, or not to participate, will not influence current or future relationships with the University of Delaware.

If you have any questions about this study, please contact the Principal Investigator, Kelly Sherretz, at (302) 831-4271 or kscollon@udel.edu. If you have any questions or concerns about your rights as a research participant, you may contact the University of Delaware Institutional Review Board at hsrb-research@udel.edu or (302) 831-2137.

- 1) Please provide a quick overview of library/media center services available in your school building. [Size (in comparison to an average classroom), staffing, budget, etc.]
(If no school library/media center is provided in the building in question, pose the following questions in a prospective fashion such as asking what role school libraries SHOULD play as opposed to DO they play in their building.)
- 2) School libraries/media centers serve a variety of different roles depending on the grade levels they serve, availability of other interrelated services in a district and district priorities. What do you believe are the major roles that school libraries/media centers play in your school?
- 3) Budget allocations for school libraries/media centers have been decreasing in many districts throughout the nation. Over the past five years, has funding for the school libraries/media center in your building Increased, decreased, or remained level? What would you say is the primary reason or major reasons for changes in the amount allocated for library/media center purposes?
- 4) School librarians/media center personnel perform a variety of different functions. Look at this card (hand them a card with the following items listed)
 - a. Reading Motivator
 - b. Readers' Advisor/Content Advisor
 - c. Instructional Resources Manager
 - d. Technology Instructor
 - e. Information Literacy Coach
 - f. In-service Training Provider (for faculty)
 - g. Co-Teacher
 - h. Teacher
 - i. Curriculum development partner

Which, if any, of the roles listed are the primary roles fulfilled by librarians/media center personnel in your school? Which do you think is the most important in your school? What other role or roles do school library/media center staff fulfill in your school?

- 5) Are you responsible for conducting formal observations and/or for performing an annual performance evaluation of certified school librarians and other library staff?
If yes, what criteria are applied that specifically reflect library-related duties and responsibilities?

- 6) A variety of statewide studies have shown a high correlation between high quality school libraries/media centers and performance on standardized reading tests even when differences related to socio-economic factors and overall funding are controlled. To what extent do you believe that educational outcomes are currently being factored into decisions related to the school library/media center in your school?
- 7) What other services or programs exist in your school that substantially contribute to academic success in reading and/or information literacy?

Delaware School Libraries Master Plan

Interview Questions for School Librarians/Media Center Staff

Welcome and introductions

- Participants and facilitators
- Thank the participants for their willingness to come
- Any administrative details

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You are being invited to participate in a research project that will assist in the creation of a master plan for Delaware school libraries. The purpose of this study is to gather information about school libraries from school librarians to help inform the creation of master plan for Delaware school libraries. This plan will create a vision that will inform solutions for the development of state-of-the-art school libraries in Delaware. This work is being done with the Delaware School Libraries Council, with support from the Delaware Department of State and the Department of Education. You will be one of approximately 100 participants.

There are no risks to your participation and there may be no direct benefit to you. However, your participation is an opportunity to share your experiences, beliefs, and opinions. Furthermore, your participation will enable us to better understand the role of school libraries.

We will take special steps to protect your privacy. Your responses will be accessible only to the researcher team on this project. After the interview, identifying information (names, schools) will be removed to ensure your participation will remain confidential. All data will be stored in a password protected folder encrypted files and/or in locked filing cabinet. The stored data will be destroyed three years after the conclusion of the project. The research team will make every effort to keep all research records that identify you confidential. The findings of this research may be presented or published. If this happens, no information that gives your name or other details will be shared.

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participate or if you decide to stop taking part in the research at a later date, there will be no penalty or loss of benefits to which you are otherwise entitled. Your decision to stop participation, or not to participate, will not influence current or future relationships with the University of Delaware.

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- 1) Please provide a quick overview of library/media center services available in your school building. [Collection size, facility size (in comparison to an average classroom), staffing, budget, etc.]
- 2) School libraries/media centers serve a variety of different roles depending on the grade levels they serve, availability of other interrelated services in a district and district priorities. What do you believe are the major roles that your school library/media center plays in your school? What role or roles do you think it SHOULD be playing?
- 3) Budget allocations for school libraries/media centers have been decreasing in many districts throughout the nation. Over the past five years, has funding for your school library/media center Increased, decreased, or remained level? What would you say is the primary reason or major reasons for changes in the amount allocated for library/media center purposes?
- 4) School librarians/media center personnel perform a variety of different functions. Look at this card (hand them a card with the following items listed)
 - a. Reading Motivator
 - b. Readers' Advisor/Content Advisor
 - c. Instructional Resources Manager
 - d. Technology Instructor
 - e. Information Literacy Coach
 - f. In-service Training Provider (for faculty)
 - g. Co-Teacher
 - h. Teacher
 - i. Curriculum development partner

Which, if any, of the roles listed do you currently fulfill? Which is the most important in your school given the make-up of your student body and other services that are available in your building/district? What other role or roles do you currently fulfill in your school?

- 5) A variety of statewide studies have shown a high correlation between high quality school libraries/media centers and performance on standardized reading tests even when differences related to socio-economic factors and overall funding are controlled. To what

extent do you believe that your district/school board has considered educational outcomes in decisions that have affected the school library/media center in your school?

- 6) Discuss the existing level of interaction that you have with teachers in your school. Do you think that the faculty perceives you as a “teaching partner” in the school?
- 7) Do you serve on key school committees that make decisions regarding issues such as curriculum, new educational initiatives, grant applications, etc.? Describe your role on these committees.
- 8) How would you characterize your role in regard to integrating technology into the curriculum? Would you characterize your role as:
 - a. Leadership role
 - b. Substantive support role
 - c. General support role
 - d. Peripheral role

Give examples of your involvement in integrating technology into the curriculum.

- 9) How would you characterize your role in imparting information literacy skills to students? Your role in imparting these skills to teachers?
- 10) What do you believe are the major factors that impact your ability to offer the highest quality school library service in your building? Are these factors the same or different on the district level? If the factors are different, please provide examples.
- 11) What else do you think we need to know to understand the status and role of the library/media center in your school?

Appendix D: Delaware School Library Media Specialist Certification Requirements

Source: <http://regulations.delaware.gov/AdminCode/title14/1500/1580.shtml>

1580 School Library Media Specialist

1.0 Content

1.1 This regulation shall apply to the issuance of a Standard Certificate, pursuant to 14 **Del.C.** §1220(a), for School Library Media Specialist. This certification is required for grades K to 12.

1.2 Except as otherwise provided, the requirements set forth in 14 **DE Admin. Code** 1505 Standard Certificate, including any subsequent amendment or revision thereto, are incorporated herein by reference.

2.0 Definitions

2.1 The definitions set forth in 14 DE Admin. Code 1505 Standard Certificate, including any subsequent amendment or revision thereto, are incorporated herein by reference.

3.0 Standard Certificate

3.1 In accordance with 14 Del.C. §1220(a), the Department shall issue a Standard Certificate as a School Library Media Specialist to an educator who has met the following:

3.1.1 Holds a valid Delaware Initial, Continuing, or Advanced License or Standard or Professional Status Certificate issued by the Department prior to August 31, 2003; and,

3.1.2 Has met the requirements as set forth in 14 DE Admin. Code 1505 Standard Certificate, including any subsequent amendment or revision thereto; and

3.1.3 Has satisfied the additional requirements in this regulation.

4.0 Additional Requirements

An educator shall also meet the following:

4.1 Has satisfied at least one of the following additional requirements:

4.1.1 Holds a Masters or Doctoral degree from a regionally accredited college or university in an American Library Association approved program in School Library Media; or

4.1.2 Holds a Masters or Doctoral degree from a regionally accredited college or university in any area; and

4.1.2.1 Has completed a Department approved School Library Media program which meets American Library Association Standards.

7 DE Reg. 632 (11/1/03)

Renumbered effective 6/1/07 - see Conversion Table

12 DE Reg. 1206 (03/01/09)



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