Chapter 3. PA School Library Spending & PSSA Scores

The relationship between available data on school library spending and Pennsylvania System of School Assessment (PSSA) Reading and Writing scores is examined in this chapter. Data from Section Seven of the Pennsylvania School Library Study regarding funding from all sources for school library resources for 2010-2011 was correlated with PSSA Reading and Writing scores.

Library resources are defined in the Pennsylvania School Library Study survey as all materials that students and teachers have access to for learning that are either housed in or licensed by the school library. This includes library books, audio-visual materials, magazines, electronic databases (other than Power Library databases that are provided by the state) and other resources. For students to become 21st century learners, they must have access to the widest possible variety of information resources, and become capable users of them to acquire new knowledge and create new knowledge.

The criterion used in the comparisons of means in this chapter is $11 or more versus less than $11 annually per student, because this value was closest to the sample median or average.

To avoid repetition in this and succeeding chapters, see Chapter 1 for detailed methodological information, including details about the variety of PSSA score data employed in this phase of the study, its source, and an explanation of associated terminology as well as a description of comparison-of-means analysis (t test) and its statistical significance.

At the end of the chapter, these findings are discussed in relation to the Guidelines for Pennsylvania School Library Programs, a 2011 document of the Office of Commonwealth Libraries in the Pennsylvania Department of Education.

Throughout the chapter, the findings are illustrated by quotes offered by respondents to the project’s surveys.

Library Resources Spending

The benchmark for this analysis, $11 per student, falls closest to the median for all respondents to the Pennsylvania School Library Study survey—54% of respondents report a spending range of $11 or more per student, leaving 46% who report spending less than $11 per student.
Distribution of Library Resources Spending Per Student

<table>
<thead>
<tr>
<th>Spending Range</th>
<th>Percent</th>
<th>Cumulative</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2.9%</td>
<td>2.9%</td>
</tr>
<tr>
<td>$1-10</td>
<td>43.2%</td>
<td>46.1%</td>
</tr>
<tr>
<td>$11-15</td>
<td>21.3%</td>
<td>67.4%</td>
</tr>
<tr>
<td>$16-20</td>
<td>15.3%</td>
<td>82.7%</td>
</tr>
<tr>
<td>$21-25</td>
<td>7.8%</td>
<td>90.5%</td>
</tr>
<tr>
<td>$26-30</td>
<td>3.8%</td>
<td>94.3%</td>
</tr>
<tr>
<td>$31-35</td>
<td>1.5%</td>
<td>95.8%</td>
</tr>
<tr>
<td>$36-40</td>
<td>1.4%</td>
<td>97.2%</td>
</tr>
<tr>
<td>$41-45</td>
<td>0.7%</td>
<td>97.9%</td>
</tr>
<tr>
<td>$46-50</td>
<td>0.7%</td>
<td>98.6%</td>
</tr>
<tr>
<td>$51+</td>
<td>1.4%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>100.0%</td>
<td></td>
</tr>
</tbody>
</table>

As for the staffing analyses, findings are reported for:

- All students
- Students who are economically disadvantaged (i.e., poor), Black, Hispanic, and have Individualized Education Program (IEPs)
- Students at elementary, middle, and high school levels.

PSSA Reading Scores by Student Cohort by Library Resources Spending

Library resources spending levels are associated with better PSSA Reading scores for all students as well as specific cohorts of students at both ends of the achievement spectrum.

- Consistently, Advanced Reading scores are higher and Below Basic Reading scores lower for students who have better-funded school library programs ($11 per student or more per year) than for those who do not.
- This trend applies to all students, regardless of their socio-economic, racial/ethnic, and disability status.
- Indeed, generally, students who are economically disadvantaged (i.e., poor), Black, Hispanic, and have Individualized Education Program (IEPs)—i.e., students who are disabled) benefit proportionally more than students generally.

I chaired the library curriculum committee to rewrite the library curriculum so it is aligned with the 21st Century Learner Standards. … I feel I have shown the administrators that the libraries are essential to student success. Our budgets have been supported, and our programs, to date, have not been cut.

- Elementary School librarian
Note: Charts in this chapter compare the PSSA scores of students with and without a key indicator of school library resources spending—whether or not a school spends $11 or more per student on library resources. ($11-20 per student was the median response to the School Library Study survey. Example: schools that spend more per student average 38.2% of all students scoring Advanced in Reading, while schools spending less average 33.0% of students scoring Advanced.

PSSA Reading Scores by Grade Level by Library Resources Spending

Levels of spending on library resources are also associated with better PSSA Reading scores, regardless of grade level, and at both ends of the achievement spectrum.

- Consistently, Reading scores at all grade levels are better for students who have better-funded libraries (i.e., $11 per student or more per year) than those who do not.
- The difference in Advanced Reading scores associated with library resources spending grows from elementary to secondary level (3% to 7%).
- The difference in Below Basic Reading scores associated with library resources spending grows from elementary and middle to high school level (4% to 7%).

In this School District [our] budget is ample enough to support the library resources needed to support the school’s curriculum and to promote independent reading for our students. … Without the administrative support for [spending on library] resources we would not be able run our thriving, collaborative school library program …

- High School librarian
My last principal relied very heavily on Access PA services thru me to obtain material that he needed to complete his doctorate. We borrowed a lot of material from [a] Penn State library. After that he was a staunch supporter of our library and provided as much funding as he could.

-Middle School librarian

**PSSA Writing Scores by Student Cohort by Library Resources Spending**

Higher spending on library resources is associated with better PSSA Writing scores—both more students scoring Advanced and fewer scoring Below Basic—for all students as well as major cohorts of students.

- The proportional impact of library resources spending on Writing scores is greater than on Reading scores.
- For all students, those with better-funded libraries ($11 per student or more per year) are more likely to have Advanced Writing scores as those with poorer libraries.
- Students who are Hispanic and have better-funded libraries are twice as likely to have Advanced Writing scores and about half as likely to have below basic scores as their counterparts without better-funded libraries.

I … make sure we have the specific resources [needed] for research and pleasure reading … The success of our student body is dependent on the support I get from my administration and school board. A sufficient budget for print and electronic resources [is] critical.

- High School librarian
PSSA Writing Scores by Grade Level by Library Spending

Consistently, average Writing scores at all grade levels are better for students with better-funded libraries than those with less well-funded libraries.

- Libraries that spend $11 or more annually per student tend to have better PSSA Writing scores—both more students scoring Advanced and fewer scoring Below Basic—than for less well-funded libraries.
- As percentages of Advanced Writing scores grow from elementary to middle to high school level, the difference in Advanced scores associated with library funding grows from 1% to almost 3% to more than 7%.

Through my [graduate program], I learned how to advocate within the learning community as well as the local community and [with] legislators. I hosted a legislator meeting in the library and advocated for library funding. I would not have had the confidence to do so without the skills I learned in course work.

- High School librarian

This year teachers have supported the library program by participating in a modeling incentive to encourage the students to read. We have posted signs outside our rooms with our name, the book title and author of the book we are reading. We change the title and author with each new book we read. Coupled with this, I spent a large portion of my … budget on new reading materials … Hopefully, funding for school libraries will not be reduced or terminated as this would handicap our efforts in guiding our students to be lifelong learners.

- High School librarian
Summary

Per-student spending on library resources is associated with better PSSA Reading and Writing results. The proportional differences in Advanced Writing scores between students with better and less well-funded libraries are substantially greater than the proportional differences in Reading scores.

- Library resources spending is an investment that benefits all students, both high- and low-achievers. It is associated with better Reading and Writing scores—higher Advanced and lower Below Basic.

- Spending on library resources helps to close achievement gaps. These differences are not explained away by socio-economic, racial/ethnic, and disability factors.

In the *Guidelines for Pennsylvania School Library Programs*, per-student library funding levels are specified for different grade levels. Per-student library resources funding of $41 for elementary schools, $45 for middle schools, and $50 for high schools is stipulated. The guidelines further identify minimum, standard, and exemplary levels of per-student funding specifically for books and serials, audiovisuals, and electronic resources. While the *Pennsylvania School Library Survey*, which provides available data for this project, does not provide such detail, it does report overall per-student library funding in several ranges. The range that includes the median for school libraries that responded to the survey begins with $11 per student, so that cut-point is used in this analysis.

The findings of this analysis support the idea that student learning and academic achievement are associated with stronger library funding, despite the fact that few Pennsylvania school libraries approach the per-student figures in the state’s guidelines.

When students are served by better-funded school libraries, they are more likely to succeed in school than their counterparts who lack such libraries.