
This chapter examines the relationship between available data on school library access and Pennsylvania System of School Assessment (PSSA) Reading and Writing scores. Data from the Pennsylvania State Board of Education’s Pennsylvania School Library Study regarding the type of scheduling used in the school library; the number of class or smaller-group visits to the library per typical week; and the average number of hours per week the school library is open beyond the student school day were analyzed with PSSA Reading and Writing scores.

To avoid repetition in this and other 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, its findings are discussed in relation to the Guidelines for Pennsylvania School Library Programs, a 2011 document of the Office of Commonwealth Libraries, Pennsylvania Department of Education.

Library Access

Separate analyses were conducted for three measures of library access: availability of flexible scheduling of the library, the number of group visits per typical week, and the number of hours per week the library is open beyond the school day.

Flexible scheduling refers to whether classes and students visit the library on a fixed schedule (i.e., scheduled like any other class—for example, Monday from 9 to 10 a.m.) or when warranted by instructional needs. Times that are flexibly scheduled are initiated by the librarian and the teacher based on a curricular, resource-based lesson or unit that is usually designed, taught, and assessed collaboratively by both professionals. In the survey, respondents were asked to report if their libraries are scheduled flexibly all the time, some of the time, or not at all. In this chapter, those who responded all or some of the time (45.5% of library survey respondents) were compared to those who indicated their libraries did not have any flexibly-scheduled time (54.5%).

Group visits to school libraries happen for a variety of reasons. Sometimes, a whole class visits the library—sometimes with their teacher and sometimes without. Other times, especially when students are older, smaller groups of students who are collaborating on an assignment visit the library. While some group visits are for the purpose of instructional delivery by the librarian, a teacher, or both, at other times, group visits are for the purpose of individual or group research or study. In this chapter, students whose school libraries report 21 or more group visits per week (48.8% of library survey respondents) are compared with those reporting fewer than 21 group visits per week (50.2%).

To some extent, the degree to which a school library is a vital force in its building may be indicated by when it is available to students. Schools that place a high priority on instruction and instructional support as well as support services to disadvantaged and struggling students often have their libraries open before the school day begins and/or after it ends. An open library gives many students a place to go where they can have access to resources and activities that effectively extend their school day. In this chapter, students whose schools report having libraries that are open at any time before and/or after the school day (50.2% of library survey respondents) are compared with those whose libraries are open only during the school day (49.8%).

52
Using the same analytical strategy as for staffing and spending, findings are reported for:

- All students
- Students who are economically disadvantaged (i.e., “Poor”), Black, Hispanic, and have Individualized Education Programs (IEPs—i.e., those with disabilities)—hereafter “cohorts
- Students at elementary, middle, and high school levels.

**PSSA Reading & Writing Scores by Student Cohort by Flexible Scheduling**

Availability of flexibly scheduled access to school libraries is associated with better PSSA Reading and Writing scores—both more Advanced and fewer Below Basic—for all students as well as major cohorts at both ends of the achievement spectrum.

- Consistently, students with flexibly scheduled access to their school libraries are more likely to earn Advanced and less likely to earn Below Basic scores in Reading and Writing.

- For all students as well as students who are Poor, who are Black, and who are Hispanic, the Advanced Reading score difference between students with and without flexibly scheduled access to their libraries is around 10%.

- The association between flexible scheduling and Writing is more pronounced. All students and those who are Black and disabled are about four times more likely to earn Advanced Writing scores with flexible scheduling. Students who are Hispanic are almost seven times more likely to earn Advanced scores with flexible scheduling.

- The lone exception to these results is for Below Basic Writing scores of students with Individualized Education Programs (IEPs), for whom there was no significant difference associated with flexible scheduling. Notably, however, these students are still more likely to earn Advanced Writing scores if access to their libraries is scheduled in accordance with instructional needs rather than a fixed schedule.
Note: Throughout this chapter, this and following charts report average Advanced and Below Basic PSSA scores for students with and without certain kinds of access to their school libraries (i.e., flexible scheduling, group visits per week, library hours beyond the school day). These charts include Advanced and Below Basic score averages for all students as well as for students who are Economically Disadvantaged (i.e., “Poor”), who are Black, who are Hispanic, and who have Individualized Education Programs (IEPs). Example: Of all students, 42.5% of those with flexibly scheduled library access score Advanced, while only 31.9% of those without such access score Advanced.

Our library offers the best of both worlds. A small portion of the schedule operates on a fixed schedule to instruct students in scheduled library classes that provide specific skills. The majority of the schedule is open for teachers to collaborate with the librarian for literacy or integrated content lessons.
- Elementary School administrator

The library staff continuously collaborates with teachers in designing lessons to integrate technology into daily lessons within the regular education classroom, and is flexible in scheduling computer lab times for co-teaching.
- Elementary School teacher
PSSA Reading & Writing Scores by Grade Level by Flexible Scheduling

The results of the Pennsylvania School Library Study survey indicate that flexible scheduling of library access is far from common: 54.5% of responding schools reported library access on an exclusively fixed schedule. Generally, flexible scheduling is less common at the elementary level and more common at the high school level. This most likely explains the mixed results associated with PSSA scores and flexible scheduling at different grade levels.

- With flexibly scheduled library access, students at all grade levels are more likely to earn Advanced and less likely to earn Below Basic Reading scores. Differences in Advanced and Below Basic Reading scores associated with flexible scheduling at the high school level, while pronounced, were not significant.

- Both elementary and high school students are twice as likely to earn Advanced Writing scores when they have flexibly scheduled library access. Writing differences, both Advanced and Below Basic, associated with flexible scheduling are in directions consistent with elementary and high school findings, but are not significant for middle schools. Similarly, Below Basic Writing differences associated with flexible scheduling at the high school level are in directions consistent with Advanced Writing differences, though enough closer to not be significant (i.e., the smaller Below Basic differences might not be reproduced with a different sample of schools).
The library staff continuously collaborates with teachers in designing lessons to integrate technology into daily lessons within the regular education classroom, and is flexible in scheduling computer lab times for co-teaching.
- Elementary School teacher

[My co-teacher and I schedule our entire course around library availability. Our librarian is integral to our course. She knows everything that we teach, and our students look to her as a third teacher in our combined classroom.
- High School teacher

### Reading: Percent of Students with Advanced & Below Basic PSSA Scores by Flexible Scheduling Status by Grade Level

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Advanced</th>
<th>Below Basic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>33.3%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Middle</td>
<td>40.8%</td>
<td>8.3%</td>
</tr>
<tr>
<td>High</td>
<td>36.2%</td>
<td>14.6%</td>
</tr>
</tbody>
</table>

**Note:** Throughout this chapter, this and following charts report average Advanced and Below Basic PSSA scores for students with and without certain kinds of library access. These charts include Advanced and Below Basic score averages by grade level. Example: Of elementary students, 33.3% of those with flexibly scheduled library access score Advanced, while only 30.2% of those without such access score Advanced.
I am the librarian in a K-5. About three years ago, my district moved to a fixed/flexible schedule and it has created an environment where I am able to integrate important information literacy skills into the classroom curriculum with the students. I have the opportunity to co-teach integrated curriculum with teachers.

- Elementary School librarian

Our program, which operates under a flexible schedule, … maximizes our human and material resources. In the 2010-11 school year we co-taught 1,456 classes with our content teachers. Those classes included research projects, integrated 21st century skills, common core ELA standards into course content, and facilitative visits to promote and foster independent reading.

- High School librarian

Our second grade teacher was doing a non-fiction animal report. We were discussing the reports, and I suggested she use [a specific database]. I demonstrated it to her, and said the children could print out the information on their animal. First she said, "Are we allowed to do that?" Then she said the computer lab was always in use when she had available time. I had an open 30-minute time slot in my schedule and invited her to bring her class. I instructed the children on how to locate their animal and print the report. She said, "I have a new respect for what you do."

- Elementary School librarian

When I took over the library 2 years ago, it was representative of libraries from a day gone by. … Rather than throw up my hands in disgust, I saw my situation as an opportunity to transform the library into a productive and thriving 21st century environment. Despite major budget cuts, the library has seen marked improvements, including … a more open design plan [and] a flexible schedule for student access.

- High School librarian
PSSA Reading & Writing Scores by Student Cohort by Group Visits

The need for whole classes of students as well as smaller groups of students to visit school libraries is probably greater than ever. *The Standards for the 21st Century Learner* as well as PA/Common Core standards place a high value on students learning to collaborate in gathering and analyzing information and creating and sharing new knowledge. It is little surprise, therefore, that all students seem to perform better on the PSSA Reading tests—more scoring Advanced and fewer scoring Below Basic—when they make more weekly visits to their libraries. Interestingly, however, when these results are examined for particular student cohorts, the findings are mixed.

- Better Advanced Reading scores are associated with frequency of group library visits for all cohorts, though for students who are Black and who are Hispanic, differences are not significant.

- While Advanced Writing scores are predictably more likely for students who make more rather than fewer group library visits, the differences are not significant (i.e., might not be reproduced with another sample).

- For students who make more group library visits, Below Basic scores are fewer for all cohorts for both Reading and Writing than for students who make fewer such visits, though for Writing—in marked contrast to Reading—the only significant differences are for students who are poor and who are Black. This finding suggests that group library visits may be a useful strategy for closing the Writing achievement gap for students who are poor and who are Black.

One possible explanation for these mixed findings may be the fact that, as technology advances, enabling school library programs to become more diffused or networked throughout their schools—reaching into every classroom, lab, and office—the need for physical visits to the library space by groups of students may be reduced. Increased collaboration between classroom teachers and librarians—especially when it involved teachers inviting librarians to co-teach in their classrooms—may also lead to circumstances in which physical visits to the library are less frequent than they might have been otherwise. However, virtual visits via the library’s website may be on the increase.

---

I worked with my librarian to develop 2 research projects for my kindergarten students. The research projects are conducted in the library over 7-8 scheduled lessons lasting 45 minutes each. … We are promoting and encouraging 21st century skill building through the research process.
- Elementary School teacher

After discussing curriculum units in Social Studies, the librarian and I spent time outlining and planning a project about Native Americans. I took my students to the library … We worked together on expectations, gathering information, cooperative learning, presentation, and evaluation. It was a rewarding experience for all. In fact, we enjoyed it so much, we decided to do a similar project on insects.
- Middle School teacher

Developing and adapting projects is one of the best parts about being a teacher. Because I teach English my students are frequently in the library completing research and studying a variety of topics.
- High School teacher
PSSA Reading & Writing Scores by Grade Level by Group Visits

In contrast to the analysis of student cohorts, the analysis by grade level indicates a stronger association between group library visits and PSSA Reading and Writing scores. At all grade levels, students who visit their school libraries in groups more frequently tend to out-perform those who make such library visits less often, especially at the Advanced level.

- Consistently, students at all grade levels are likelier to earn Advanced Reading scores and less likely to earn Below Basic scores, if they visit their school libraries more frequently in groups than if they visit less frequently.

- Advanced Writing scores are also likelier when students make more group visits to their school libraries.

Not only do [my librarian and I] work together to plan lessons, we also teach together or take turns teaching certain lessons. Our students benefit greatly from having us both in the library to help them with their research and the creation of their projects.
- Middle School teacher

My 8th grade Gifted seminar must create a 20 minute (minimum) PowerPoint presentation … on a topic that has two sides or a question to be answered. It is not a "tell everything needed to know" type of project. The library becomes my classroom during the initial research phase of this project.
- Middle School teacher

I schedule my classes in the library on a regular basis. I interact with our school librarians weekly. ... I would find it difficult to do my job as a social studies teacher without them and the resources that they acquire, evaluate, and maintain. The best teaching and learning that I experience as a teacher happens in the library!
- High School teacher
READING: Percent of Students with Advanced & Below Basic PSSA Scores by Frequency of Group Library Visits by Grade Level

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Advanced</th>
<th>Below Basic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>31.9%</td>
<td>10.5%</td>
</tr>
<tr>
<td></td>
<td>29.5%</td>
<td>11.4%</td>
</tr>
<tr>
<td>Middle</td>
<td>44.3%</td>
<td>7.8%</td>
</tr>
<tr>
<td></td>
<td>50.4%</td>
<td>10.9%</td>
</tr>
<tr>
<td>High</td>
<td>38.8%</td>
<td>13.2%</td>
</tr>
<tr>
<td></td>
<td>33.7%</td>
<td>16.2%</td>
</tr>
</tbody>
</table>

WRITING: Percent of Students with Advanced & Below Basic PSSA Scores by Frequency of Group Library Visits by Grade Level

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Advanced</th>
<th>Below Basic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>4.4%</td>
<td>2.1%</td>
</tr>
<tr>
<td></td>
<td>3.7%</td>
<td>2.0%</td>
</tr>
<tr>
<td>Middle</td>
<td>16.7%</td>
<td>1.9%</td>
</tr>
<tr>
<td></td>
<td>14.0%</td>
<td>2.9%</td>
</tr>
<tr>
<td>High</td>
<td>21.5%</td>
<td>1.0%</td>
</tr>
<tr>
<td></td>
<td>27.4%</td>
<td>1.3%</td>
</tr>
</tbody>
</table>

NS = not significant
PSSA Reading & Writing Scores by Student Cohort by Hours Open Beyond School Day

Availability of flexibly scheduled library access and numbers of group visits to libraries per typical week reflect primarily on the working relationships between teachers and librarians. The number of hours a school library may be open beyond the school day—that is, either before and/or after school—is an indicator of the extent to which the library operates independently as an extension of classroom instruction and the extent to which it offers support to students who may need it most. The evidence from this analysis of test scores by student cohort suggests that the extra time and attention students receive in the library can make a difference that helps them to excel, especially at writing.

- More students earn Advanced Reading and Writing scores where libraries are open before and/or after school.
- All students and cohorts are at least twice as likely to earn Advanced Writing scores if their libraries are open beyond the school day.
- Students who are Hispanic are three times as likely to earn Advanced Writing scores under such conditions.
- Students who are Economically Disadvantaged (i.e., “Poor”) and who are Black are less likely to score Below Basic on Writing, but for all students and students who are Hispanic and have IEPs, Below Basic Reading differences associated with hours the library is open beyond the school day are not significant (i.e., might not be reproduced with a different sample).

Our librarian is well respected in our school, by faculty and students alike. She promotes reading for pleasure, and often gets students excited about newly acquired novels she has purchased for the library. She is very accommodating whenever I schedule my classes in the library. She jumps right in with helping students with their computer/technology needs (formatting, citing, inserting pictures, etc.). She teaches lessons on plagiarism and citations and using information ethically.
- Middle School teacher

The library is a haven where students and teachers can go to collaborate, work, [and] study... It is one the nuclei of a school building.
- High School teacher

Through creative scheduling, [our librarian] and her assistant insure the library is open for 30 minutes before school and at least an hour after school to provide students a place to do their work. These students are not passively monitored; our library staff actively engages with our student learners to offer support, coaching, instruction, and anything else they need to succeed.
- High School administrator
PSSA Reading & Writing Scores by Grade Level by Hours
Open Beyond School Day

By grade level, the association of PSSA scores with availability of library hours beyond the school day provides further evidence of the value of extended library access for many students. Indeed, from elementary to high school levels, having library hours beyond the school day is associated with consistent improvements in both Advanced and Below Basic Reading and Writing scores.

- Students at all grade levels are more likely to earn Advanced Reading scores where libraries are open beyond the school day. These differences in Advanced scores associated with whether or not the library is open beyond the school day grow steadily from level to level.

- Middle and high school students are less likely to earn Below Basic Reading scores where libraries are open beyond the school day.

- Elementary and high school students are more likely to earn Advanced Writing scores where libraries are open beyond the school day.

- High school students are less than half as likely to score Below Basic on Writing where libraries are open longer hours.

Our school librarian is invaluable. Not only is she teaching all grade levels and all district wide library concepts, she is also available to our staff for advice on topics and accessing pertinent information for various topics. Our librarian is constantly learning the most up to date technology tools and teaching the staff how to incorporate these into our daily lessons. She offers before and after school training in these new technological advances and even provides one on one for teachers and staff.
- Elementary School teacher

At our school, the library has become the center of learning at all levels. … Students have access to the library before, during and after school, which makes the library a social as well as learning hub.
- Middle School librarian

The library in our school is at the center of the building, and at the center of the instruction as well. The library is used in myriad ways to promote reading, research, 21st Century Skills, and a love of knowledge. Whether being used for book browsing, reading, magazine time, or research lessons, the library is always busy. Our library is also available 24/7 through access to our library catalog and website on the school webpage. Various online subscription databases provide information for students in every subject area. … The library is also open after school to provide a place for reading and study support for all students.
- Middle School librarian
READING: Percent of Students with Advanced & Below Basic PSSA Scores by Hours Beyond School Day by Grade Level

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Advanced</th>
<th>Below Basic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>31.4%</td>
<td>29.9%</td>
</tr>
<tr>
<td></td>
<td>11.1%</td>
<td>11.3%</td>
</tr>
<tr>
<td>Middle</td>
<td>48.5%</td>
<td>44.0%</td>
</tr>
<tr>
<td></td>
<td>9.2%</td>
<td>10.7%</td>
</tr>
<tr>
<td>High</td>
<td>37.3%</td>
<td>30.9%</td>
</tr>
<tr>
<td></td>
<td>14.3%</td>
<td>17.0%</td>
</tr>
</tbody>
</table>

NS = not significant

Writing: Percent of Students with Advanced & Below Basic PSSA Scores by Hours Beyond School Day by Grade Level

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Advanced</th>
<th>Below Basic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>4.9%</td>
<td>3.4%</td>
</tr>
<tr>
<td></td>
<td>2.2%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Middle</td>
<td>15.3%</td>
<td>13.8%</td>
</tr>
<tr>
<td></td>
<td>2.3%</td>
<td>2.7%</td>
</tr>
<tr>
<td>High</td>
<td>19.4%</td>
<td>25.8%</td>
</tr>
<tr>
<td></td>
<td>0.9%</td>
<td>2.1%</td>
</tr>
</tbody>
</table>

NS = not significant
[Our library staff] have taught numerous in-service classes and workshops before and after school to educate staff about new software, programs, and resources
- Elementary School teacher

[Our librarian] takes the time to make sure that each and every student has access to the library and understands the workings of a library. She makes a schedule that is good for the students even if it is not good for her.
- Middle School teacher

Our high school librarian is the person in our school who provides a "home base" for our kids. Students truly enjoy going to the library and choose to do so before and after school as well as during their lunches. … We are also blessed to have a librarian who takes an active interest in what is going on in every classroom. She truly wants to know what is happening so she can align her library with our needs.
- High School teacher

[Our librarian] adds additional support to those students who have missed class by allowing them to come to the library during lunch or after school to work on projects and is especially helpful to those that were absent when a lesson was taught in the library. I am assured knowing she will provide as much assistance as is necessary for their success.
- High School teacher

Summary

- Students tend to perform better on both PSSA Reading and Writing tests when they have:
  - Flexibly scheduled access to school libraries
  - More frequent opportunities to visit their school libraries in groups
  - Access to their school libraries beyond the school day

While Guidelines for Pennsylvania School Library Programs does not promulgate any numerical targets related to the access issues addressed in this chapter—flexible scheduling of library access, group visits to libraries, and library hours open beyond the school day—it does describe ideal library facilities in terms that are entirely consistent with these ideas as well as a collaborative, inquiry based approach to learning.

The findings of this analysis support the general idea that student learning and academic achievement are associated with better access to library facilities, both for project-based curricular work assigned by a teacher and/or a librarian, as well as for self-directed study and extra-curricular learning.

When students have readier access to their school libraries—access to library staff and resources when they are instructionally relevant, when students are called upon to collaborate with each other, and when students need their learning strengthened by the library beyond the school day—they are more likely to succeed in school than their counterparts who lack such access.
Our district offers flexible scheduling in the libraries of all schools, including elementary. The best lessons that occur in my library are those where the teacher is a truly collaborative partner. We plan together, decide which parts of the lesson each of us will teach (or co-teach), plan for some type of formal or informal assessment, and schedule enough time to allow the students to learn and utilize their 21st century research skills. They also schedule time in the library regularly so that students become familiar and comfortable with using and enjoying the materials. The most library-savvy students I work with are allowed to come to the library often for both class work and to check out materials. These are the students who know how to find things and will search out materials for research and pleasure.

- Elementary School librarian

Since being hired in 2010, I've made great effort to shift the focus of the library as a storage facility for resources, and more as an active classroom. I've developed projects focusing on two different branches: research skills and reading promotion. I try to give equal effort to both. Because of my flexible schedule, I have been able to implement grade-level projects that ensure that the instruction is the same for all students. While the information skills are the same, I am able to co-plan with teachers to keep the projects geared toward their own lesson content and style.

- Junior High School librarian

Our high school recently re-wrote the ELA curriculum. As one could imagine, it's been quite a bear to implement in its first year. When thinking about beginning the new research unit with my students, I didn't know where to begin. When I find myself troubled or needing professional guidance, I always run to my librarian. She's extremely knowledgeable and willing to take the time to plan with me. We sat down together to for a few days to work through the lesson essential questions, deciding how we would tackle every aspect of the unit. We developed the project together, the schedule, the activities—everything! We were co-planning and eventually, we co-taught the entire unit in the library. We were even able to incorporate a fabulous library curriculum unit about collaboration into what we were doing for the research unit. I was extremely pleased with our final product. The students learned so much about how to be good researchers, be better readers, and ultimately, how to work in a world where collaboration is key.

- High School teacher

[Our library] is a wonderful center or hub of our school, and is usually filled to capacity with students at almost all available times [including] before and after school.

- High School teacher

The library is in the center of the school, literally and figuratively. During the school day all three computer labs are often booked. After school, when the library is open from 3 to 9 pm one day per week, it looks like a mob scene on some days, with hundreds of students busy at work.

- High School administrator