

# Creating 21st-Century Learners: A Report on Pennsylvania's Public School Libraries



***Creating 21<sup>st</sup>-Century Learners:***  
***A Report on Pennsylvania's Public School Libraries***

**October 2012**



**PA SCHOOL  
LIBRARY PROJECT**

*Learn. Explore. Excel.*

**Acknowledgment**

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Any views, findings, conclusions or recommendations expressed in this report do not necessarily represent those of the Institute of Museum and Library Services.



## Foreword

A school library helps each school meet its mission of every student learning and achieving academic success. A school library helps teachers teach and students learn; it promotes information literacy and digital citizenship; it fosters in students a love of and enthusiasm for reading independently and encourages students to become life-long learners. In the school library, students learn to access resources in many formats, become critical evaluators of information they need, and use information technology effectively and ethically.

A school library inspires students to create new knowledge, pursue their interests, and relax with a good story—in print or e-book format. But in too many Pennsylvania schools this school library is not the reality for students. Years of neglect have weakened many school libraries and diminished opportunities for students to learn. The neglect comes, in part, from misconceptions about the roles school libraries and school librarians play in student learning, especially in the 21<sup>st</sup>-century.

The school library is much more than a room of resources. Each school library needs a certified school librarian who is an expert at teaching research skills, integrating technology into the teaching-learning process, and encouraging students to read independently across the curriculum. The librarian collaborates closely with classroom teachers in every subject area to teach students everything from making sense of the information they gather to collaborating with other students to create new knowledge as they move from elementary and middle school through high school and into college and the workforce.

Understanding these critical roles of the school librarian and school library program is an important step in reversing this benign neglect. The PA School Library Project challenges these misconceptions by examining the connection between school library infrastructure and student achievement in Pennsylvania and demonstrating the impact of the 21<sup>st</sup>-century school library and librarian on student achievement.

Using data collected in the Spring of 2011 for the Pennsylvania State Board of Education Study of the state's public school libraries and examining standardized Pennsylvania System of School Assessment (PSSA) Reading and Writing test scores for the same year, a team of researchers studied five components of school library infrastructure:

- Staffing
- Collections
- Digital Resources and Technology Infrastructure
- Library Access
- Funding

According to the research findings, students who have access to a quality school library program developed with these building blocks have an academic advantage over students who did not have such access. These differences are not explained away by the socio-economic, racial/ethnic, or disability status of the students. Here are a few highlights:

- Investments in library staff benefit all students. Full-time, certified librarians are associated with better PSSA Reading and Writing scores.
- For several student groups that tend to experience achievement gaps—economically disadvantaged, Hispanic, Black, and those with IEPs (Individualized Education Programs)—Reading and Writing results are markedly better when those students attend a school with a librarian with library support staff. In fact, they benefit more proportionally than the general school population.
- The impact of quality school library programs with these components is even stronger on Writing scores than Reading scores.
- All students—both high-achievers and low-achievers—benefit and schools that leverage school library programs can narrow achievement gaps among their students.
- Generally, the combined impact of these components—staffing, resources, technology, access to the library, and funding—has a steady and consistent effect on student learning and achievement regardless of demographic and economic differences among students.

## The Impact of a Full-Time, Certified School Librarian on Student Achievement



Penrose Elementary School Librarian Phyllis Hayes works with one of her fifth-grade students.

*-Stuart Goldenberg*

Researchers examined the impact of a full-time, certified librarian on student achievement by comparing PSSA Reading Test scores across several subgroups of students who have access to a full-time, certified librarian (i.e., 35 or more hours per week) with the scores of students who do not have access to a full-time, certified librarian (i.e., fewer than 35 hours per week). The data show that, consistently, students who have access to a full-time, certified librarian scored higher on the PSSA Reading Test than those students who do not have such access. This finding is true for all students, regardless of their socio-economic, racial/ethnic, and/or disability status.

Researchers also examined PSSA Writing Test scores. Considering all students, those students with access to a full-time, certified librarian are almost three times as likely to have “Advanced” scores on the PSSA Writing Test as those students without access to a full-time, certified librarian.

When examining test score data by grade level, the impact of a full-time, certified librarian on PSSA Writing Test scores is most dramatic for high school students. Nearly twice as many high school students who have access to a full-time, certified librarian scored “Advanced” on the PSSA Writing test as those students without access to a full-time, certified librarian.



## **The Impact of the Size of the Book Collection on Student Achievement**

Even with the addition of information technology in school libraries, there remains a constant: a robust collection of books—physical books—has a great impact on student achievement. The research findings show that students who have access to a library with a robust, current collection of books have higher scores on both the PSSA Reading Test and the PSSA Writing Test. More than half of Pennsylvania’s middle school students who have access to a library with a large collection of current books (i.e., more than 12,000 volumes) scored “Advanced” on the PSSA Reading Test. The impact of a large collection on PSSA Writing Test scores was just as significant. More than a quarter of high school students who have access to a school library with a large collection of books scored “Advanced” on the PSSA Writing Test.



Garnet Valley Elementary School Librarian Tracy Nelson helps students find books for a research project.

*-Stuart Goldenberg*

## **The Impact of Access to Digital Resources on Student Achievement**

As computers and portable digital devices become more accessible in schools, the need increases for experts to guide students and teachers through the array of information

technology available and integrate it into their learning. Digital resources—e-books and licensed databases, as well as the ever-growing Web-based tools, applications and social media—are key components needed to develop successful 21<sup>st</sup>-century learners, and students who have access to these digital resources show dramatically higher

academic achievement. The research findings show that twice as many students with access to licensed electronic databases that provide periodical articles, encyclopedias, maps, photos, primary sources and other reference materials scored “Advanced” on the PSSA Writing Test as those students without access to such databases.

***For subgroups of students who are minorities, the numbers of students whose test scores are higher are even more striking.***

Among subgroups of students who are minorities as defined in the PSSA testing program, the numbers of students whose test scores are higher are even more striking: more than three times as many students who are Hispanic and who have access to electronic databases scored “Advanced” on the PSSA Writing Test as those students who are Hispanic and do not have such access. For students who are Black, the outcomes are similar; nearly three times as many students who are Black and who have access to electronic databases scored “Advanced” on the PSSA Writing Test as those students who are Black and who do not have access to such databases.

The research findings show that the benefits of having access to database resources are cumulative for students across the grade levels, with students scoring increasingly higher as they move from elementary school, to middle school and high school. At the high-school level where students begin to conduct research more independently, having access to licensed databases means that nearly twice as many high school students who have such access scored “Advanced” on the PSSA Writing Test as those high school students who do not have access to databases.

## The Impact of Library Access on Student Achievement



Wayne Elementary School Librarian Sue Dahlstrom meets before school with her pajama-clad Reading Olympians.

*-Stuart Goldenberg*

Although around-the-clock access to the library's digital resources is critical to 21<sup>st</sup>-century learners, research suggests that access to a physical school library and its program of instruction is equally as important. Students need to be able to use the library and its resources and to have access to the school librarian throughout the school day as well as before and after school. Most middle and high schools employ a full-time, certified school librarian to provide such flexible access throughout the school day. At the elementary level, however, access to the library is often on a "fixed" schedule, with each teacher assigned a specific day and period for a class visit. This fixed schedule is often required because of district contractual agreements for teachers to have a planning period. Because many elementary libraries cannot seat more than one class at a time, teachers and students are denied access when it would best

meet their curricular needs. Access to school library resources throughout the school day is important for students to master the school's curriculum and has a tremendous impact on their academic achievement.

- Nearly half of all students with flexible access to their school library during the school day scored "Advanced" on the PSSA Reading Test.



- Four times as many students with flexible access to their school library during the school day scored “Advanced” on the PSSA Writing Test as those students without access.



Edison High School Librarian Magna Diaz opens her library to students before and after school.

*-Stuart Goldenberg*

- For students who are minorities the results are even more dramatic. Six times as many students who are Black and have flexible access to their school library during the school day scored “Advanced” on PSSA Writing Tests as those students without such access. Seven times as many students who are Hispanic and who have flexible access to their school library during the school day scored “Advanced” on PSSA Writing Tests.

Opening the school library—either before school or after school or both—also has an impact on student achievement.

- More than twice as many students who are able to use their school library before or after the student school day scored “Advanced” on the PSSA Writing Test as those students without such access.
- Comparing the scores of various sub-groups of students shows similar results. Twice as many students with an IEP who were able to use their school library before or after school scored “Advanced” on the PSSA Writing Test as students without such access. For students who are Hispanic, nearly three times as many scored “Advanced” on the PSSA Writing Test as those Hispanic students who do not have access to the library before or after school.

## The Impact of Funding for Library Resources on Student Achievement

School districts throughout Pennsylvania invest varying amounts for the purchase of resources for their libraries. What the research findings show is that as the investment level increases, the rate of student achievement accelerates.

- Half of all middle-school students whose school district invested \$21 or more per student annually for library resources scored “Advanced” on the PSSA Reading Test.



Phoenixville Area Middle School Librarian Carole Turk works with students on a research project.

*-Stuart Goldenberg*

- Student scores on the PSSA Writing Test were also higher with higher investments. Nearly twice as many students whose school district invest \$21 or more per student annually for library resources scored “Advanced” on the PSSA Writing Test than those students whose districts invest less.

The test score results were even more dramatic for students who are Hispanic in districts that invest \$21 or more per student. More than twice as many students who are Hispanic scored “Advanced” on the PSSA Writing Test as those students who are Hispanic in districts that invest less.

## Conclusions

Imagine teachers in a school trying to teach their students critical thinking and communication skills without a school library. It's even harder to imagine creating 21<sup>st</sup>-century independent learners—students prepared for college and the workplace—without a school library.



New Hope-Solebury High School Librarian Mary Schwander reviews research databases for a 10<sup>th</sup>-grade science class.

*-Stuart Goldenberg*

Yet throughout Pennsylvania, many students don't have to imagine learning in a school without a library or librarian; it is their reality. Funding for school libraries and for school librarians can be among the first reductions made when budgets are cut. Many K-12 students do not have the opportunities to learn from a certified school librarian or reap the benefits of access to a well-resourced library with appropriate technologies. As state funding cuts

for public schools continue, these inequities grow, in Pennsylvania and throughout the country.

The research findings presented provide clear and consistent evidence of the incredible impact school library resources and personnel have on student achievement, and the findings make a definitive case for building strong libraries in every public school throughout Pennsylvania.

## Credits and Additional Acknowledgments

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Dr. Keith Curry Lance and the RSL Research Group, Colorado, with assistance from Dr. Mary K. Biagini, Associate Professor and Director, School Library Certification Program in the School of Information Sciences at the University of Pittsburgh, analyzed data and conducted the research. All findings and related qualitative surveys of school administrators, teachers, and librarians can be found at the project website: <http://paschoollibraryproject.org>.

Additional thanks goes to the project's Advisory Board members, Professional Judgment Panel members, and Focus Group participants.

### PA SCHOOL LIBRARY GRANT ADVISORY BOARD:

#### STAFF

##### GRANT PROJECT DIRECTOR

**Debra E. Kachel**

Legislation Co-Chairperson, PA School Librarians Association

North Wales

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**Sandra L. Zelno**

School Reform Associate, Education Law Center

Pittsburgh

##### HSLC PROJECT DIRECTOR

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Pittsburgh

**Edward J. Maritz, Ed.D.**

Education and Community Activist

McKees Rocks

**PROFESSIONAL JUDGMENT PANEL MEMBERS—HERSHEY, PA—JANUARY 10, 2012****PROJECT STAFF**

Keith Curry Lance

Mary K. Biagini

Debra E. Kachel

Sandra L. Zelno

**LIBRARIANS**

Kim Brosan, Librarian

Williamsport Area High School

Williamsport Area School District

Williamsport

Allison Burrell, K-12 Librarian

Southern Columbia Area School District

Catawissa

Dotty Delafield, Librarian

Mount Nittany Middle School, State College Area School District

State College



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Karen Hornberger, Librarian Palisades High School Palisades School District	Kintnersville,
Eileen Kern Vice President/President-Elect PSLA Retired Librarian Kratzer Elementary, Parkland School District	Whitehall
Nancy Smith Latanision, Instructor Library Science Dept., Kutztown University	Allentown
Deb Lowenburg, Librarian Pleasant Valley High School Pleasant Valley School District	Broadheadsville
Katie Makatche, Librarian Warrior Run Middle School Warrior Run School District	Turbotville
Janet Malloy, Retired High School Librarian School District of Philadelphia	Cheltenham
Bob McConnell, PSLA Board Member Retired Librarian Grove City Area High School, Grove City Area School District	Grove City
Katherine Miller, Librarian CAMS North School Chambersburg Area School District	Chambersburg

Terry Morriston, Librarian Peters Township High School Peters Township School District	McMurray
--	----------

LaVerne Motley, Retired Library Supervisor Rose Tree Media School District	Glen Mills
---	------------

Beth Sahd, Director of Library Services and Librarian Cocalico High School, Cocalico School District	Denver, PA
---	------------

Mary Schwander, Librarian New Hope-Solebury High School New Hope-Solebury School District	New Hope
---	----------

**FOCUS GROUP PARTICIPANTS—PITTSBURGH, PA—MARCH 27, 2012**

Tom Baker, School Director North Hills School District	Pittsburgh
---	------------

Amy Brazill, PTA Member/Dilworth Elementary/Tutor Pittsburgh School District	Pittsburgh
---	------------

Christine Buffington, Local Task Force on Right to Education—IU 2 Pittsburgh School District	Pittsburgh
---	------------

Paula V. Cooper, Seminarian Pittsburgh Interfaith Impact Network	Pittsburgh
---	------------

Farrah, Cornick, Student Urban Pathways Charter School	Pittsburgh
---	------------

Donora Craighead, Community Activist Wilkinsburg Borough School District	Wilkinsburg
---	-------------

Elizabeth L. Fleischer, Principal Development Editor Materials Research Society	Wilkinsburg
--	-------------

Kathy Flynn-Somerville, Ed.D., Teacher Pittsburgh School District	Pittsburgh
--	------------

John W. Frombach, Retired School Administrator Past President PA Assn. of School Business Officials	Pittsburgh
--	------------

DaVonna Graham, Youth and Community Organizer A+ Schools	Pittsburgh
Harold Grant, Staff Representative Pittsburgh Federation of Teachers	Pittsburgh
Rosanne Javorsky, Assistant Executive Director Allegheny Intermediate Unit	Homestead
Anne McCafferty, Senior Director, Human Resources VIVISIMO	Pittsburgh
Shula Nedley Ph.D., Visiting Professor Point Park University	Pittsburgh
David B. Thornton, Pastor, Grace Memorial Presbyterian Church Pittsburgh Interfaith Impact Network	Pittsburgh
Tia Torres, Student A+ Schools Teen Bloc, Pittsburgh School District	Pittsburgh
Judith Touré, Ed.D., Assistant Professor Carlow University	Pittsburgh
Drew Welsh, 1st Assistant District Attorney Clarion Co. District Attorney's Office	Clarion

#### **FOCUS GROUP PARTICIPANTS—GREENSBURG, PA—MARCH 28, 2012**

Sue Akins, Community Activist Blairsville-Saltsburg School District	Blairsville
Jack Boylan, Retired Superintendent Norwin School District	North Huntingdon
Kathryn M. Elder, School Director Greater Latrobe School District	Latrobe
Barbara Flynn, Children's Librarian Norwin Public Library	Irwin
Janice S. Gebicki, Director of Education United Way of Westmoreland County	Greensburg

Michelle Geissler Former Library Power Director/1st Gr. Teacher	Irwin
Kelly Gustafson, Elementary Principal Peters Township School District	McMurray
Matthew J. Hutcheson, Ed.D., Superintendent Jeannette City School District	Jeannette
Derek Illar, Attorney Watson Mundorff Brooks & Sepic, LLP	Connellsville
Sharon Nelmes, Early Learning Consultant Head Start	Saltsburg
Lori Ruffner, Financial Advisor Morgan Stanley	Manor
Regina Sciallo, Disability Advocate/Parent Co-Chair LTF IU 7 The Arc of Westmoreland/ACHIEVA	Greensburg
Thomas J. Sturm, School Director Norwin School District	North Huntingdon
Tracy Trotter, Library Director Adams Memorial Library	Latrobe
Megan Marie Van Fossan, Director of Special Services McGuffey School District	Claysville
Sharon M. Van Fossan, Retired High School Librarian	Steubenville, OH
Debra Wohlin, Advocate/Parent Co-Chair LTF IU 7 East Suburban Citizen Advocacy	Delmont
Kate Zingarelli, Education Programs Specialist Westmoreland Intermediate Unit	Greensburg

## **FOCUS GROUP PARTICIPANTS—HERSHEY, PA—APRIL 12, 2012**

Edward J. Albert, Ed.D., Superintendent, Tulpehocken School District PA Assn. of Rural and Small Schools	Bethel
Jack Belford, Executive Director Follett Library Resources	McHenry, IL
Donna Benson, Legislative Liaison PA Association for Gifted Education	Lancaster
Sharon L. Brumbaugh, Dir. /Early Childhood Exec. Leadership Program National Institute for School Leadership	Washington, DC
Jane D. Carroll, Senior Fellow Education Policy and Leadership Center	Harrisburg
Winston E. Cleland, Ph.D., Policy Specialist (PASCD) PA Assn. of Supervision & Curriculum Dev.	Carlisle
Connie Cochran, Ed.D., Education Consultant English Language Learners	Harrisburg
Michael J. Crossey, President PA State Education Association	Harrisburg
Deborah Dunstone, President-Elect PA Congress of Parents and Teachers	Peckville
Cindy Eckerd, Legislative Information Director PA School Boards Association	Mechanicsburg
Barbara S. Ellis, Director of Library Services Hershey Public Library and PA Library Assn.	Hershey
Heidi J. Faust ESL Facilitator and Educational Consultant	Kutztown
Martin J. Hudacs, Ed.D., Superintendent, Solanco School District PA Assn. of Rural and Small Schools	Quarryville
Louis W. LaBar, Trustee, Public Library Gov. Advisory Council on Library Development	Honesdale



Larry Nesbit, Ph.D., Rep., Mansfield Univ. School Library Program Gov. Advisory Council on Library Development	Mansfield
John Pulver, Special Project Consultant PA Assn. of Career & Technical Administrators	Camp Hill
Tara Purcell, Legislative and Advocacy Chair PA Congress of Parents and Teachers	Kulpmont
Regina Yeager, Local Account Manager Follett Library Resources	Moscow

### **FOCUS GROUP PARTICIPANTS—PHILADELPHIA, PA—APRIL 18, 2012**

TaiMarie Adams, Co-Director, Education Policy Public Citizens for Children and Youth	Philadelphia
Brian Armstead, Director of Civic Engagement Philadelphia Education Fund	Philadelphia
Carol Bangura, CEO African Ctr. for Education & Sustainability, Inc.	Philadelphia
Sonya Brintnall, Speech Language Pathologist Member, Parents United for Public Education	Philadelphia
Becca Devine, Special Education Advocate/LTF I.U. 25 TEAM Inclusion, PA-TASH	Ardmore
Deborah Dickason Falk, Instructor Arcadia Univ., Immaculata Univ., Temple Univ.	Drexel Hill
Cindy Farlino, Principal School District of Philadelphia	Philadelphia
Callie Hammond, Founder and CEO Library Build, Inc.	Philadelphia
Jane Hershberger, Ed.D., Supervisor of Programs Chester County Intermediate Unit	Downingtown
Jurate Krokys, CEO Independence Charter School	Philadelphia

Janet Lonsdale, Family Advocate, Mental Health Assoc./SEPA Parents Involved Network	Philadelphia
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Deborah Wei, Director, Office of Multilingual Curriculum & Programs School District of Philadelphia	Philadelphia

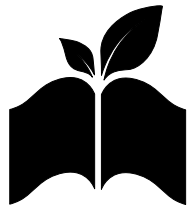
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*Cover photo:* Cathi Fuhrman, Library Department Supervisor for Hempfield School District, assists Hempfield High School students with a writing assignment.



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