Show-Me Connection

How School Library Media Centers Impact Student Achievement

2004
Show-Me Connection

- Sponsored by:
  - Missouri Department of Elementary and Secondary Education
  - Missouri State Library
  - MASL

- Thanks to:
  - Lisa Walters
  - Sara Parker
  - 782 Participants
Missouri Student Achievement

- MAP index
  - % of students at different levels of proficiency in the different content areas

- Weighted by:
  - Number of reportable students (took test) in school grade and content area

= Weighted Average MAP Index
Hypotheses

- Schools with Library Media Centers and Services display a positive relationship to the Weighted Average Map Index.
- Certain components of School Library Media Centers and Services have more of a relationship to the Weighted Average MAP Index than others.
- Although demographic characteristics have a high relationship to the Weighted Average MAP Index, they do not eliminate the positive relationships from the above two hypotheses.
Research Methodology

- Sample
- Core Data
- Questionnaire
- Data Aggregation
- Statistical Analyses
Sample

Core Data
2,243 School Buildings

Questionnaire Data
782 School Buildings

241 School Buildings that had all of data from both
Core Data

- School Building Level Data for 5 years
- Data Areas:
  - Student Data
  - Teacher/Administrator Data
  - Librarian Data
  - Library Media Data
  - Census of Technology
Questionnaire

- 8 sets of questions - 47 questions total
- Question Areas:
  - Respondent Information
  - Library Management
  - Library Staff
  - Service Hours
  - Staff Activities
  - Library / Loan Use
  - Library Technology
  - Library Collection
11 Components

- **Librarian Qualifications** (Education / Certification) – Q
- **Library Access** (Hours and Outside Access) – Q
- **Library Budget** (Total and Materials) – Q and CD
- **Library Space** (Square Footage and Seats) – CD
- **Library Staff Activities** (Learning and Teaching, Information Access and Delivery, Program Administration, Collaboration, Leadership) – Q
- **Library Usage** (Type and Flexibility of Student Use) – Q
11 Components

- **Library Management** (Use of Budget, Collection Development Policies, Relationship to Public Library, Mission/Goals/Objectives, Coordinator) – Q
- **Library Media Center Holdings** (Books, Periodicals, Catalogs, Online) – Q and CD
- **Library Staffing** (Hours of Paid Staff) – Q
- **Summer Reading Program** (Offered / Cooperatively) – Q
- **Technology** (Availability and Usage) – Q and CD
Statistical Analyses

- **Statistical Significance**
  - Extent to which the sample features represent the corresponding features in the population

- **Relationships**
  - Bivariate Correlation
  - Multiple Regressions
  - Incremental Partial Correlation Method
School Library Media Center Services

Multiple Regression

Multiple Regression Adjusted “R²” = 12.6%

Statistical Significance: Yes

True for sample and population: .003
School Library Media Center Services
Partial Correlation Analysis

Non SLMCS  
School Demographics
Community Demographics  

Non SLMCS  
School Demographics
Community Demographics  

10.6% of variance in MAP Index is associated with School Library Media Center Services  

SLMCS  
11 components  

Adjusted “R²”  
40.1%  

Adjusted “R²”  
50.7%  

Adjusted “R²”  
10.6%
So?

School library media center services exert a 10.6% statistically significant impact on student achievement.
## Top Components

<table>
<thead>
<tr>
<th>Components</th>
<th>Adjusted R²</th>
<th>Impact</th>
<th>Significant</th>
<th>External Partial (non LMS)</th>
<th>Internal Partial (Other Components)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library Usage</td>
<td>++</td>
<td>8%</td>
<td>Strong</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>Summer Reading</td>
<td>+</td>
<td>2%</td>
<td>Strong</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Library Access</td>
<td>+</td>
<td>1%</td>
<td>Yes</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Library Budget</td>
<td>+</td>
<td>3%</td>
<td>Yes</td>
<td>+</td>
<td>0</td>
</tr>
<tr>
<td>Technology</td>
<td>+</td>
<td>0%</td>
<td>Yes</td>
<td>+</td>
<td>0</td>
</tr>
</tbody>
</table>
So?

Three components of school library media center services have a statistically significant impact on student achievement:

- Usage
- Summer Reading Program
- Access
So?

• “Direct contact” seems to be the key to impact

• “Direct contact” could not occur without staff that is able and available to provide the diversified usage, programs and access needed to impact student achievement.
“Direct Contact” Conclusion

- Librarian is a must for direct contact that impacts
  - Usage
  - Summer Reading
  - Access
More Questions about “Direct Contact”

- What does usage need to include to impact student achievement?
- What does a summer reading program that impacts student achievement look like?
- What does access mean if it is to impact student achievement?
Determine how “direct contact” can be translated into “action-oriented” steps that school libraries and districts can take to impact student achievement.

- 182 hypotheses were formulated, tested and analyzed.
Usage

- Ensure that school librarians have clerical help = 4% impact.
- Provide many varieties of print and online resources, including catalog services = 2% impact.
Summer Reading Program

- Cooperation with a local public library to provide a Summer Reading Program
  = 18% impact
- Summer reading programs encourage an interest in reading, the act of reading, and lessen the impact of no formal education for three months.
Access

- Districts that have a library/media coordinator tend to have better access
  =6%
- Provide many varieties of online resources
  =22% impact
Conclusions

- Ensure school librarians have clerical help, as it makes a difference in usage.
Conclusions

- Offer a multitude and a variety of online and print resources, including an online catalog, as they impact both access and usage.
Conclusions

- Cooperate with the local public library to provide a Summer Reading Program.
Conclusions

- Ensure districts have a library/media coordinator as they enhance access.
How School Library Media Centers Impact Student Achievement