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:**
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  - 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	Questionnaire Data
2,243 School Buildings	**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

QUANTITATIVE RESOURCES

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
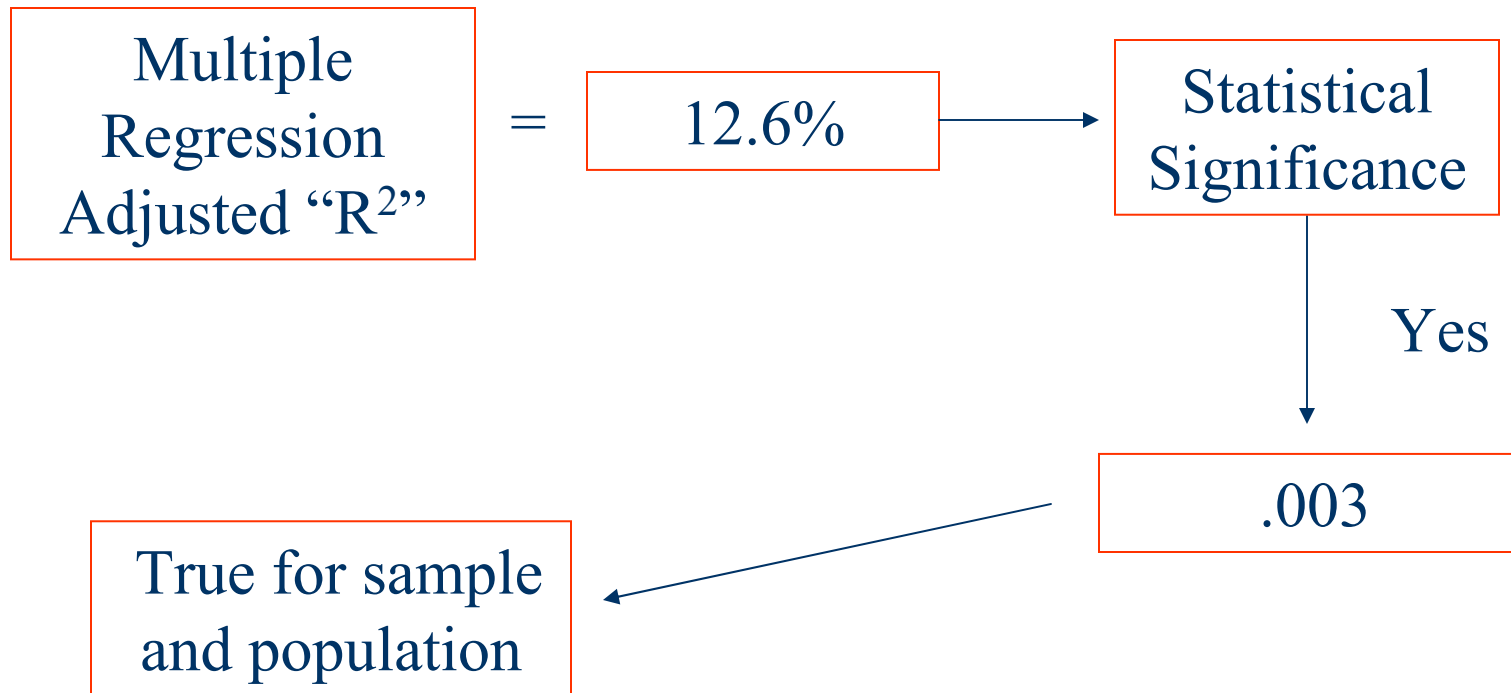- **Library Usage** (Type and Flexibility of Student Use) – Q

11 Components

- **Library Management** (Use of Budget, Collection Development Polices, 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
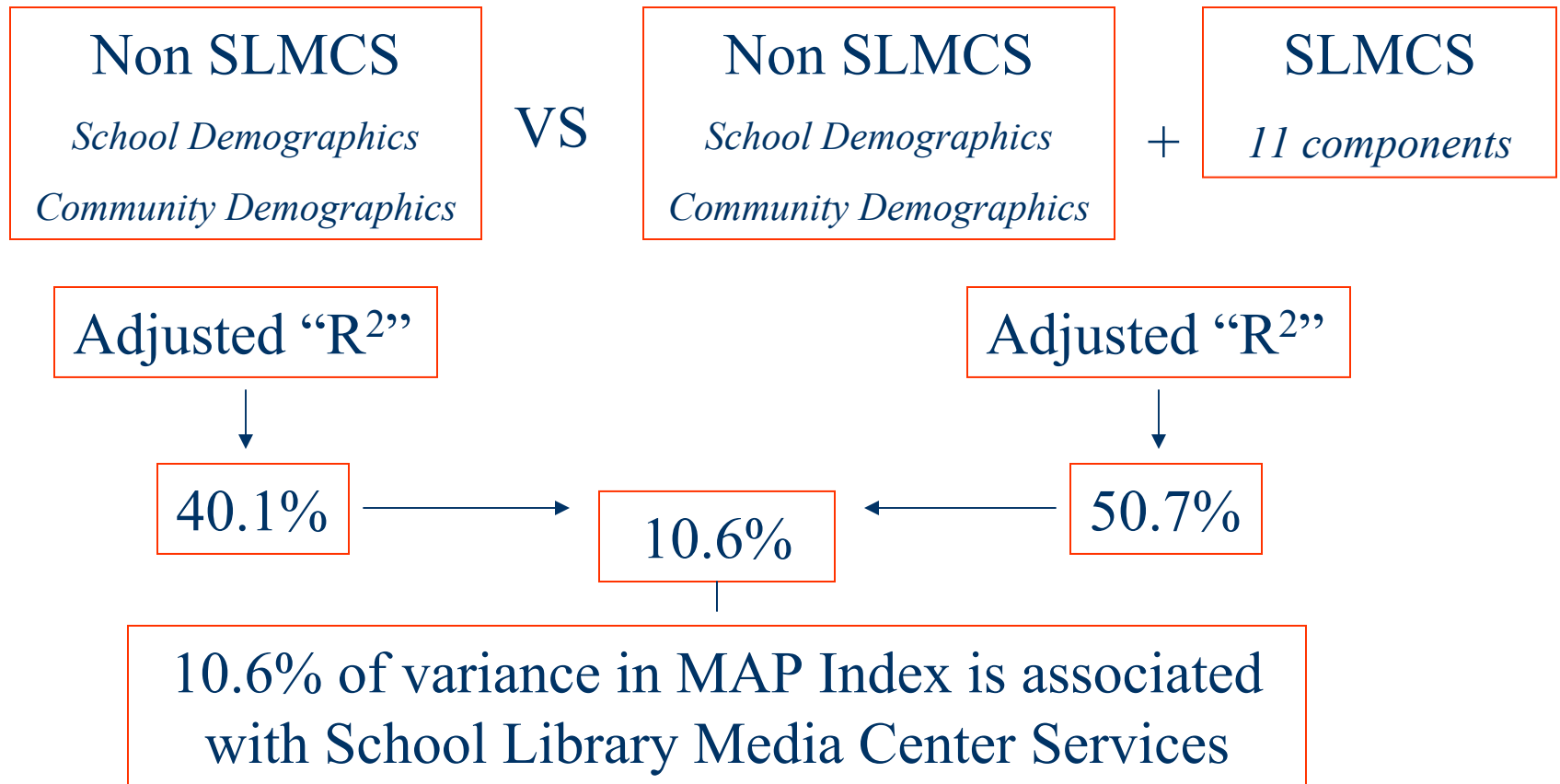
Statistical Analyses

- 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 "R^2" | = | 12.6% | → | Statistical Significance |

Yes

.003

True for sample and population

School Library Media Center Services
Partial Correlation Analysis

Non SLMCS *School Demographics* *Community Demographics*	VS	Non SLMCS *School Demographics* *Community Demographics*	+	SLMCS *11 components*

Adjusted "R^2"

Adjusted "R^2"

40.1% → 10.6% ← 50.7%

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

So?

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

Top Components

Components	Adjusted R^2	Impact	Significant	External Partial (non LMS)	Internal Partial (Other Components)
Library Usage	++	8%	Strong	++	++
Summer Reading	+	2%	Strong	+	+
Library Access	+	1%	Yes	+	+
Library Budget	+	3%	Yes	+	0
Technology	+	0%	Yes	+	0

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?

Additional Research 2004

- **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.

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