



Promoting Academic Success of Rural Students: Translating Research into Practice

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The Problem

- Rural schools traditionally low achieving
- Measures of rurality are intercorrelated with socioeconomic status (SES)
- Processes of school reform and change not adequately understood
- Little consensus about models of school improvement

The Standards and Indicators for School Improvement (SISI)

- Developed by the Kentucky Department of Education (KDE)
- Based on principles of standards-based content areas (e.g., math, English, science)
- Extended standards to incorporate factors representing whole school reform
- Nine standards with 88 indicators

Nine SISI Standards Divided Into Three Groupings

Academic Performance

Standard 1: Curriculum

Standard 2: Classroom Evaluation/Assessment

Standard 3: Instruction

Learning Environment

Standard 4: School Culture

Standard 5: Student, Family, and Community Support

Standard 6A: Professional Development

Standard 6B: Professional Growth and Evaluation



Efficiency

Standard 7: Leadership

Standard 8: Organizational Structure and Resources

Standard 9: Comprehensive and Effective Planning

The Scholastic Audit

- KDE developed 4-point behavioral anchors (from 1 = little or no development to 4 = exemplary level of development) for each of the 88 indicators
- KDE trained teams conduct week-long visit, reaching consensus on each indicator
- Only 2001-2005 available in database (currently)
- Audits expensive, invasive, stigmatized
- Audits from 2001-2012

Validity of the Scholastic Audit

- KDE and an external evaluator both checked for “leverage” points
- KDE did no formal validity study
- Several dissertations directed by Miller and Smith
 - All standards validated at elementary Ennis (2007); McKinney (2007); Saravia (2008)
 - Standards 1, 3, 7 validated at secondary (Todd, 2010)
- Other dissertations in Progress: Harper; Harvey; Huskey

Purpose

To examine the effects of a set of demographic factors, a new measure of rurality, and the Standards and Indicators for School Improvement on the Academic Index, a primary measure of Kentucky accountability

Methods

- Population--Elementary schools in Kentucky for years 2001–2005
- Sample--171 schools audited during 2001–2005
- Research Design--Correlational, with school as the unit of analysis
- Data Analysis--Descriptive statistics; three hierarchical multiple regressions with demographic controls in Step 1, three groupings of SISI standards in Step 2, as related to the Academic Index

Independent Variables

Six Demographic Factors

- % White

- % Gifted

- % Free/Reduced Lunch

- % Limited English Proficiency

- Year of Audit

- County/Independent School District

The Measure of Rurality

- NCES Urban-Centric Locale Code (recoded)

Independent Variables – SISI Standards

- First Grouping
 - Academic Performance (Standards 1 – 3)
- Second Grouping
 - Learning Environment (Standards 4 – 6)
- Third Grouping
 - Efficiency (Standards 7 – 9)

Dependent Variable

- Academic Index--A composite of content area subjects from the Commonwealth Accountability Testing System (CATS)



Results

- Step 1 (Note: Step 1 is identical in all three equations)
- Significant Demographic Factors
 - % White
 - % Gifted
 - % Free/Reduced Lunch
 - % Limited English Proficiency
 - Year of Audit
- Non-significant demographic factors
 - County/Independent School District
 - Measure of Rurality

Results (cont.)

Equation 1 (Academic Performance Grouping)

- Step 2 (Standards 1 – 3 added)
 - 5 demographic controls remain significant (F/RL and Year – highest betas at approximately .30)
 - Standard 2, Classroom Evaluation/Assessment, significant (beta = .18)
 - Standard 3, Instruction, significant (beta = .18)
 - Steps 1 and 2 adjusted R^2 of .61 and .74, respectively

Results (cont.)

Equation 2 (Learning Environment Grouping)

- Step 2 (Standards 4 – 6)
 - 5 demographic controls remain significant (Year = beta of .35)
 - Standard 4, School Culture, only significant standard (beta = .25)
 - Steps 1 and 2 effect sizes of .61 and .74

Results (cont.)

Equation 3 (Efficiency Grouping)

- Step 2 (Standards 7 – 9)
 - 5 demographic controls remain significant (Year = beta of .33)
 - Standard 8, Organizational Structure and Resources, significant (beta = .19)
 - Standard 9, Comprehensive and Effective Planning, significant (beta = .25)
 - Steps 1 and 2 effect sizes of .61 and .74

Discussion

- SISI a valid and important tool for school improvement
- Standards from all three groupings influence achievement
- Implications of Year of Audit
 - Comprehensive school reform works
 - “Scaling up” possible
 - Other work (Moore, 2003) and limits of scaling up

Agenda for the Future

- An efficacious measure of rurality
- An efficacious methodology for rurality
- A feasible SISI instrument



THANK YOU!

Questions?