THE POWER OF DATA ANALYSIS TO INFORM IMPROVEMENT

A Presentation to
MSBA Leadership Conference

Bill Elder, Keith Jamtgaard and Howard Jones
Office of Social and Economic Data Analysis
University of Missouri
June 6, 2008
SESSION GOALS

• Explore the power of data to inform school improvement
• Explore types of data of importance to school board members
• Exchange experiences and ideas
• Think, apply and dream
SESSION AGENDA

• Introduction
• Data 101
• Discuss the Board’s Role
• Demographic Data
• Resource Data
• Process Data
• Performance Data
• Reflection and Feedback
WHO ARE WE? WHO ARE YOU?

THE OFFICE OF SOCIAL AND ECONOMIC DATA ANALYSIS (OSEDA)

THE UNIVERSITY OF MISSOURI
OSEDA Values:

As part of the University of Missouri, we honor the public trust placed in our institution and accept our responsibility to be effective stewards of that trust. **We acknowledge our duty to acquire, create, transmit and preserve knowledge and to promote understanding.** We embrace the University of Missouri values of Respect, Responsibility, Discovery and Excellence.
In particular, at OSEDA we foster:

**Accessibility:** Public data and information should be readily accessible.

**Collaboration:** Collaboration and engagement is essential for the construction of meaningful policy information.

**Trust:** Trustworthy relationships and information contribute to sound policy development and decision-making.

**Excellence:** Our users deserve excellence. Excellence is achieved through the diligent individual and collaborative efforts of a skilled and experienced team of faculty and staff.
OSEDA Vision:
Policy development and decision-making is more effective because of the collaborative application of social and economic information.

OSEDA Mission:
We sustain high quality data and data analysis capabilities in order to collaborate with partners in the analysis of social and economic data in ways that contribute to the development of improvements in the health, education and well-being of people and communities in Missouri and the world.
WHY ARE WE SO INTERESTED IN DATA?
For just a minute, think about some important decision you and your fellow board members made this year when additional data analysis would have made you more confident in your decision.
DATA 101:
From Data to Information
Our conceptual frameworks define the meaning and relevance of data

- Data
- Information
- Knowledge
- Wisdom
Our conceptual frameworks define the meaning and relevance of data

- Data
- Information
- Knowledge
- Wisdom

“The construction of knowledge involves the orderly loss of information, not its mindless accumulation.” — Boulding
**Indicators** are conceptually connected data. They’re answers to questions arising from the logic of the model. They may be quantitative or qualitative.
Utilization Focused Evaluation

Evaluative answers are “useful” when they reduce the risks of making the wrong decision.

To know you have asked the “right” questions and produced “useful” answers….you must understand who the decision makers are and what kinds of decisions they need to make.

— Michael Patton
THE RESULTS
of our efforts are what make a lasting difference in communities. Process is important but we plan for and evaluate results.
Purposes

- **Formative**
  - “Improve”
  - Periodic and timely
  - Focus on program activities and outputs
  - Leads to early recommendations for program improvement

- **Summative**
  - “Prove”
  - Were resources committed worthwhile?
  - Focus on outcomes and impact
  - Measures value of program based on impact
Choosing and Getting to Port (Where we’re going)

Plotting a Course ➔ Estimating Position (Where we might be)

“Summative” Result

Taking a “FIX” (where we really are)

“Set and Drift”

Adjusting Course

“Formative” Information
Missouri School Improvement Program (MSIP): Theory of Action

- **Resources** deployed
- To engage *educational processes* to
- Bring about *student outcomes/ performance*
- Within a *demographic context*

*The MSIP Standards and Indicators describe a good school, and to some extent categorize important data sources*
The MSIP Theory of Action...

**DEMOGRAPHIC CONTEXT**

**RESOURCE**
- Investments

**PROCESS**
- Practices
- Participation

**PERFORMANCE**
- Short
- Medium
- Long

- What we invest
- What we do
- Who we reach
- What results we obtain
Focusing On School/Education Data: THE BOARD’S ROLE
NSBA’s “Key Work of School Boards”

Framework of eight essential key action areas that focus and guide school boards in their efforts to improve student achievement.
The Eight Key Action Areas

1. Vision
2. Standards
3. Assessment
4. Accountability
5. Alignment
6. Climate
7. Collaborative Relationships*
8. Continuous Improvement

**Are data necessary to fulfill the Key Work of School Boards? What kinds of data would you need to know if you were doing your job regarding collaborative relationships?**

OSEDA Office of Social and Economic Data Analysis  
University of Missouri Extension
Guiding Documents:
THE BOARD’S LEGAL RESPONSIBILITY

• District Policy
• Budget
• CSIP
• Professional Development Plan
• District Curriculum
CATEGORIES OF SCHOOL DATA

- Performance Data
- Resource Data
- Process Data
- Demographic Data
School Data and Statistics

This page provides links to data about public schools in Missouri. You will find extensive educational statistics of interest to educators, parents, and policymakers. Other resources provided here are intended to assist local officials with school-improvement planning and meeting the state's accreditation requirements.

Limited data about charter schools are available. Charter schools operate only within the boundaries of the Kansas City and St. Louis school districts. They are not subject to the same data-reporting and accreditation requirements as public schools.

To obtain the latest statistics, select a school district or charter school from the lists at right. Click on “Load Profile.” This will connect you to an index of all the statistics about that district or school. To obtain building-level data, select “School District Report Cards” in the top-right corner of the index page.

### Make a Selection

#### Alphabetical List of School Districts
- Independence 30(046077)
- Iron Co. C-4(047065)
- Jackson R-I(016090)
- Jamestown C-1(068074)
- Jasper Co. R-V(049137)

#### Alphabetical List of Kansas City Charter Schools
- Academie Lafayette(048914)
- Academy of Kansas City(048908)
- Allen Village(048909)
- Alta Vista Charter Sch.(048902)
- B. Barneker Academy(048911)

#### Alphabetical List of St. Louis City Charter Schools
- Confluence Academies
- Construction Career Ctr.
- Ethel Hedgeman Lyle Academy
- Lift For Life Academy
- Peideia Academy
Research on Factors That Influence Student Achievement

**School Level**
- F1 Guaranteed and Viable Curriculum
- F2 Challenging Goals and Effective Feedback
- F3 Parental and Community Involvement
- F4 Safe and Orderly Environment
- F5 Collegiality and Professionalism

**Teacher Level**
- F6 Instructional Strategies
- F7 Classroom Management
- F8 Curriculum Design

**Student Level**
- F9 Home Environment
- F10 Learned Intelligence or Background
- F11 Knowledge
- F12 Motivation
EXAMPLES: PERFORMANCE DATA

• Annual Performance Report (APR)
• APR and AYP disaggregated by gender, race, free and reduced lunch, etc.
• District Report Card
• Nationally Standardized Test Scores
EXAMPLES: RESOURCE DATA

- Budget
- MSIP Resource Report
- Unqualified Teacher List
- Official District Audit
- Technology Audit
- Facilities Audit
EXAMPLES: PROCESS DATA

• MSIP Advance Questionnaire (AQ)
• MSIP Observation Summary Report
• Report from MSIP Review Team
• District Observation Reports
• Program Evaluations
EXAMPLES:
DEMOGRAPHIC DATA

• Enrollment trends
• Free and reduced lunch count
• Kids Count
• Census data
DEMOGRAPHIC DATA
Percent Population Change

April 1, 2000 to July 1, 2007

World: 6.7 Billion
U.S.: 302 Million
Mo.: 5,878,415

Source: U.S. Census Bureau, Population Division, 2007

Office of Social and Economic Data Analysis

University of Missouri Extension
Percent Population Change
April 1, 2000 to July 1, 2007

U.S.: 20.2 Million
Five States: 10.6 Million

Total Population
World: 6.7 Billion
U.S.: 302 Million
Mo.: 5,878,415

Percent change in population
- 20.0 or more
- 7.2 to 10.9
- 5.0 to 7.1
- 2.0 to 4.9
- 0.0 to 1.0
- Population decline

Source: U.S. Census Bureau, Population Division, 2007

OSEDA Office of Social and Economic Data Analysis

University of Missouri Extension
**Percent Population Change**

*April 1, 2000 to July 1, 2007*

- **World**: 6.7 Billion
- **U.S.**: 302 Million
- **Mo.**: 5,878,415
- **Boone**: 152,435

- **U.S.**: 20.2 Million
- **Five States**: 10.6 Million

---

**Total Population**

- **World**: 6.7 Billion
- **U.S.**: 302 Million
- **Mo.**: 5,878,415
- **Boone**: 152,435

**Percent change in population**

- **U.S. percent**: 7.2
- **5.0 to 7.1**
- **2.0 to 4.9**
- **0.0 to 1.0**
- **Population decline**

**Missouri**

- **5.0%**

**US**

- **7.2%**

*Source: U.S. Census Bureau, Population Division, 2007*

*OSEDA* Office of Social and Economic Data Analysis

*University of Missouri Extension*
Percent Change in Population for Counties and Puerto Rico Municipios:
April 1, 2000 to July 1, 2007
Percent Population Change in Missouri, by County
2000-2007

Map Generated on: 23 Apr 2008
Natural Increase in Missouri Population by County
2000-2007

Prepared by: University of Missouri Extension, Office of Social and Economic Data Analysis (OSEDA)
Map Generated on: 23 Apr 2008
Employment in Missouri increased by 33,100 from April 2006 to April 2007, seasonally adjusted.

Unemployment Rates
Missouri vs. U.S.
(past 36 months, seasonally adjusted)
Regional Economic Share

St. Louis County 21%
Jackson County 11%
Central 6.5%

2007 Missouri Economic Report

Regional Economic Share

Central 6.5%
Jackson County 11%
St. Louis County 21%
Comparative Performance of Economic Areas in Missouri

Source: MERIC
Economic Share in Missouri by County, 2006

Source: MERIC
New Businesses per 1,000 Population, 2006

Source: MERIC
How flat the world is depends on where you’re standing...

- *The World is Flat – “new oil wells”*
  — Thomas Friedman
- *Making Globalization Work*
  — Joseph Stiglitz
- *Networking Diverse Assets, especially human capital... “collaboration” is hard*
• Divergent skill distributions
• The changing economy
• Demographic shifts
Missouri’s rating declined from 28th in 2002 to 35th in 2007.
Issues from the “Undertaker”

• Aging & Boomers
• Entitlements
• Globalization
• Energy
• Education
Change in the Hispanic Population 2000 - 2006

- Percent Change: U.S. 6.4% -- Hispanic 25.5%
- Hispanics (44.3 million)
- Blacks (38.3 million)
- Missouri Hispanic Population 2006
  - 164,194
  - 38.4% gain since 2000
## Enrollment Change

*From 1.4% to 2.8% in 5 years*

<table>
<thead>
<tr>
<th></th>
<th>1999</th>
<th>2005</th>
<th>Change</th>
<th>Pct Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>896,910</td>
<td>894,855</td>
<td>-2,055</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>12,633</td>
<td>25,166</td>
<td>12,533</td>
<td>99.2%</td>
</tr>
</tbody>
</table>
Hispanic Population in Missouri, 2006

Prepared by: University of Missouri Extension, Office of Social and Economic Data Analysis (OSEDA)
Map Generated on 13 Nov 2007
Percent Missouri Population Age 65+: 1990-2020

SOURCE: Census Bureau/NCHS. Projection algorithm, programming by OSEDA
Chart Prepared by: University of Missouri Extension, Office of Social and Economic Data Analysis
24March2006
Percent of Missouri’s Population, 2005:
Age 65 and Older

Percent
7.8 - 12.2 (15)
12.3 - 14.8 (20)
14.9 - 16.7 (28)
16.8 - 19.5 (29)
19.6 - 26.6 (23)

Missouri = 13.3%

Source: USDC, Bureau of the Census, 2000 Decennial Census
Produced by: University of Missouri Extension, Office of Social and Economic Data Analysis
Map generated on 28 June 2007
Figure 4-5.
**Labor Force Participation Rates for the Population Aged 55 to 64 by Sex: 1950 to 2003**

Note: The reference population for these data is the civilian noninstitutionalized population.

Source: Bureau of Labor Statistics, 2004c. For full citation, see references at end of chapter.
Composite Kids Count Ratings, 2007

Quality of Life Indicators for Kids

Source: University of Missouri, Office of Social and Economic Data Analysis
Prepared by: University of Missouri Extension, Office of Social and Economic Data Analysis (OSEDA)
Map Generated on: 11.08.2006

OSEDA
Office of Social and Economic Data Analysis

University of Missouri Extension
REFLECTION

What are three demographic trends that you believe will impact your district?
The New Census

• The “Short Form” – once a decade
• The “Long Form”
  – The American Community Survey (ACS) is the new “long form” and will be annual.
ACS Plans

- ACS data are available now for areas with populations of 65,000 or more.
- In 2008, the Census Bureau will release the three-year estimates for areas with populations of 20,000 or more.
- In 2010, 5-year estimates will be released including the smallest of geographic areas—down to the tract and block group levels.
For example, Missouri Median Household Income…

American Community Survey (Adjusted to 2006)

• 2005 $43,310 +/- $456
• 2006 $42,841 +/- $449
Change - $469 +/- $640

Note Margins of Error +/-
Missouri Median Household Income

American Community Survey (Adjusted to 2006)
- 2005 $43,310 +/- $456
- 2006 $42,841 +/- $449
- Change - $469 +/- $640

Current Population Survey (not adj.)
- 2005 $44,686 +/- $1,465
- 2006 $44,487 +/- $1,647

(Note none of the differences are statistically significant.)
Key Elements

• **Geography**  Nation, states, cities, counties and *school districts*.

• Now 65,000+  Eventually, areas as small as *census tracts* using multi-year averages.

• **Sample Size**  *About 3 million addresses* per year. Data are collected from about one-twelfth of the sample each month.
ACS Implications

- Annual small area estimates & indicators
- Methods may better reflect seasonal areas
- Change more *apparent* in larger areas
- Estimates and projections reworked
- Demand for integration and meaning

...*Google Earth on data steroids*...
RESOURCE DATA
Resources Are Needed To Get Done What Needs To Get Done

• It all starts with the budget!
• Is the district budget an important part of your work?
• Is the budget the educational plan, and are priorities expressed in dollars and cents?
Is Our Only Valuable Resource The Money?

• What are the intangible assets or resources that you value in your district?

• Do you gather information regarding how you identify and make use of these intangible resources (social capital)?
MSIP Resource Standards

• Program of Studies
• Class Size/Assigned Enrollments
• Professional Support Staff
• Administrative Staff
• Certification
• Planning Time
PROCESS DATA
THE MSIP ADVANCE QUESTIONNAIRE (AQ):

A storehouse of often underutilized but important perceptual data
The Advance Questionnaire (AQ)

- Perceptual data obtained through a questionnaire(s)
- Provides a voice for all key stakeholder groups
- Includes questions based on critical research-based elements
- Allows development of additive scales consistent with Effective Schools Research
The Advance Questionnaire (AQ)

• Longitudinal data available from 1990 to present in the form of legacy scales & items.
• Unlike many perceptual data collection tools & processes, the AQ offers checks on reliability and validity.
• Scales directly relate to MSIP standards & indicators.
Response Rates for the State Sample 2006-07

<table>
<thead>
<tr>
<th></th>
<th>N Received</th>
<th>Population Estimate</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>106,034</td>
<td>127,758</td>
<td>83%</td>
</tr>
<tr>
<td>Parents</td>
<td>76,297</td>
<td>152,468</td>
<td>50%</td>
</tr>
<tr>
<td>Faculty</td>
<td>11,740</td>
<td>14,646</td>
<td>80%</td>
</tr>
</tbody>
</table>
Selected Additive Scales/Definitions

• **Leadership:** This scale identifies the degree to which leadership is perceived as effective in improving student learning.

• **School Climate:** This scale identifies the degree to which all students feel respected and valued.

• **Efficacy and Expectations:** This scale identifies the degree to which teachers and students believe that they are capable of impacting student achievement.
Additive Scales and Definitions (cont.)

• **Differentiated Instruction:** This scale identifies the degree to which teachers vary and revise instruction to meet the needs of students.

• **Safe and Orderly Environment:** This scale identifies the degree to which the school environment is safe and orderly.
Efficacy/Expectations Scale (Faculty)

1. There are effective supports in place to assist students who are in jeopardy of academic failure.

2. I emphasize the importance of effort with students.

3. I have the skills necessary to meet the needs of all learners in my classroom.

4. I believe that I can positively impact student performance.
Efficacy/Expectations Scale (Faculty)

5. Students are held accountable for doing quality work.
6. All staff in our school hold high expectations for student learning.
7. There are avenues for recognizing and rewarding the accomplishments of all students.
Variance In MAP Communication Arts Achievement is Explained by...
FACULTY: Efficacy & expectations explains 10.9% of the variance in communication arts achievement.
Example from Happy Valley R-IX School District

The efficacy and expectations scale from the faculty Advance Questionnaire identifies the degree to which teachers believe that they are capable of impacting student achievement.

The Faculty scale for Efficacy & Expectations consists of seven questions:
<table>
<thead>
<tr>
<th>Happy Valley District Faculty</th>
<th>percentile</th>
<th>mean</th>
<th>std dev</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>All staff in our school hold high expectations for student learning.</td>
<td>53</td>
<td>4.18</td>
<td>0.79</td>
<td>173</td>
</tr>
<tr>
<td>I believe that I can positively impact student performance.</td>
<td>35</td>
<td>4.56</td>
<td>0.52</td>
<td>173</td>
</tr>
<tr>
<td>I emphasize the importance of effort with students.</td>
<td>60</td>
<td>4.75</td>
<td>0.55</td>
<td>173</td>
</tr>
<tr>
<td>I have the skills necessary to meet the needs of all learners in my classroom.</td>
<td>29</td>
<td>4.19</td>
<td>0.77</td>
<td>173</td>
</tr>
<tr>
<td>Students are held accountable for doing quality work.</td>
<td>72</td>
<td>4.22</td>
<td>0.71</td>
<td>173</td>
</tr>
<tr>
<td>There are avenues for recognizing and rewarding the accomplishments of all students.</td>
<td>61</td>
<td>4.36</td>
<td>0.58</td>
<td>173</td>
</tr>
<tr>
<td>There are effective supports in place to assist students who are in jeopardy of academic failure.</td>
<td>30</td>
<td>4.01</td>
<td>0.94</td>
<td>173</td>
</tr>
</tbody>
</table>
## School Building Results for Efficacy and Expectations Faculty Scale

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<tr>
<th>district</th>
<th>school_name</th>
<th>percent</th>
<th>ile</th>
<th>mean</th>
<th>std_dev</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>HAPPY VALLEY</td>
<td>DISTRICT</td>
<td>53</td>
<td>4.32</td>
<td>0.45</td>
<td>173</td>
<td></td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>HAPPY VALLEY HIGH</td>
<td>43</td>
<td>4.19</td>
<td>0.51</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>HAPPY VALLEY MIDDLE</td>
<td>80</td>
<td>4.44</td>
<td>0.43</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>HILL TOP ELEM.</td>
<td>10</td>
<td>4.14</td>
<td>0.39</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>JOHNSON ELEM.</td>
<td>62</td>
<td>4.46</td>
<td>0.42</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>PARK ELEM.</td>
<td>39</td>
<td>4.35</td>
<td>0.41</td>
<td>21</td>
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<tr>
<td>HAPPY VALLEY</td>
<td>DEERFIELD ELEM.</td>
<td>45</td>
<td>4.38</td>
<td>0.39</td>
<td>38</td>
<td></td>
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</tbody>
</table>
FACULTY: Efficacy & expectations explains 10.9% of the variance in communication arts achievement.

- Race and SES: 32.7%
- Efficacy & Expectations: 10.9%
- Other: 56.4%
State Distribution — Faculty

facefficacy_expect district level

Percent

1 1.2 1.4 1.6 1.8 2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8 4 4.2 4.4 4.6 4.8 5

facefficacy_expectm
Student Perceptions: Happy Valley R-IX School District

The efficacy and expectations scale from the student (grade 3 and older) Advance Questionnaire identifies the degree to which students believe that they are capable of impacting student achievement.

The Student scale for Efficacy & Expectations consists of six questions:
Efficacy/Expectations Scale
(Students)

1. If I do well in school, it will help me when I grow up.
2. Being successful in school today will help me in my future.
3. I can do well in school.
4. I learn a lot in this school.
Efficacy/Expectations Scale
(Students)

5. My teachers think I can learn.
6. My family believes that I can do well in school.
7. My teachers expect very good work from me.
STUDENTS: Efficacy & expectations explains 17.2% of the variance in communication arts achievement.
<table>
<thead>
<tr>
<th>Student</th>
<th>percentile</th>
<th>mean</th>
<th>std dev</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>Being successful in school today will help me in my future.</td>
<td>78</td>
<td>4.59</td>
<td>0.77</td>
<td>1618</td>
</tr>
<tr>
<td>I can do well in school.</td>
<td>80</td>
<td>4.41</td>
<td>0.76</td>
<td>1618</td>
</tr>
<tr>
<td>I learn a lot in this school.</td>
<td>65</td>
<td>4.12</td>
<td>0.95</td>
<td>1618</td>
</tr>
<tr>
<td>My family believes that I can do well in school.</td>
<td>80</td>
<td>4.65</td>
<td>0.67</td>
<td>1618</td>
</tr>
<tr>
<td>My teachers expect very good work from me.</td>
<td>75</td>
<td>4.33</td>
<td>0.8</td>
<td>1618</td>
</tr>
<tr>
<td>My teachers think I can learn.</td>
<td>77</td>
<td>4.43</td>
<td>0.74</td>
<td>1618</td>
</tr>
<tr>
<td>district</td>
<td>school_name</td>
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<tr>
<td>HAPPY VALLEY</td>
<td>DISTRICT</td>
<td>77</td>
<td>4.42</td>
<td>0.56</td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>HAPPY VALLEY HIGH</td>
<td>69</td>
<td>4.16</td>
<td>0.62</td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>HAPPY VALLEY MIDDLE</td>
<td>85</td>
<td>4.44</td>
<td>0.55</td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>HILL TOP ELEM.</td>
<td>16</td>
<td>4.58</td>
<td>0.46</td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>JOHNSON</td>
<td>52</td>
<td>4.69</td>
<td>0.34</td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>PARK ELEM.</td>
<td>64</td>
<td>4.71</td>
<td>0.34</td>
</tr>
<tr>
<td>HAPPY VALLEY</td>
<td>DEERFIELD</td>
<td>42</td>
<td>4.67</td>
<td>0.33</td>
</tr>
</tbody>
</table>
**STUDENTS:** Efficacy & expectations explains 17.2% of the variance in communication arts achievement

- Race and SES: 45.5%
- Efficacy & Expectations: 37.3%
- Other: 17.2%
State Distribution — Student

stdefficacy_expect district level
Let's examine the results from a single school building: Hill Top Elem.

First for Faculty, then Students.
<table>
<thead>
<tr>
<th>Hill Top Faculty</th>
<th>percentile</th>
<th>mean</th>
<th>std dev</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>All staff in our school hold high expectations for student learning.</td>
<td>43</td>
<td>4.31</td>
<td>0.63</td>
<td>13</td>
</tr>
<tr>
<td>I believe that I can positively impact student performance.</td>
<td>25</td>
<td>4.54</td>
<td>0.52</td>
<td>13</td>
</tr>
<tr>
<td>I emphasize the importance of effort with students.</td>
<td>47</td>
<td>4.77</td>
<td>0.44</td>
<td>13</td>
</tr>
<tr>
<td>I have the skills necessary to meet the needs of all learners in my classroom.</td>
<td>5</td>
<td>3.92</td>
<td>0.76</td>
<td>13</td>
</tr>
<tr>
<td>Students are held accountable for doing quality work.</td>
<td>13</td>
<td>4</td>
<td>0.41</td>
<td>13</td>
</tr>
<tr>
<td>There are avenues for recognizing and rewarding the accomplishments of all students.</td>
<td>6</td>
<td>3.85</td>
<td>0.69</td>
<td>13</td>
</tr>
<tr>
<td>There are effective supports in place to assist students who are in jeopardy of academic failure.</td>
<td>8</td>
<td>3.62</td>
<td>0.96</td>
<td>13</td>
</tr>
<tr>
<td>Hill Top Elem. Students</td>
<td>percentile</td>
<td>mean</td>
<td>std dev</td>
<td>n</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------</td>
<td>------</td>
<td>---------</td>
<td>---</td>
</tr>
<tr>
<td>Being successful in school today will help me in my future.</td>
<td>14</td>
<td>4.7</td>
<td>0.58</td>
<td>85</td>
</tr>
<tr>
<td>I can do well in school.</td>
<td>26</td>
<td>4.39</td>
<td>0.71</td>
<td>85</td>
</tr>
<tr>
<td>I learn a lot in this school.</td>
<td>17</td>
<td>4.4</td>
<td>0.78</td>
<td>85</td>
</tr>
<tr>
<td>My family believes that I can do well in school.</td>
<td>8</td>
<td>4.7</td>
<td>0.55</td>
<td>85</td>
</tr>
<tr>
<td>My teachers expect very good work from me.</td>
<td>27</td>
<td>4.61</td>
<td>0.66</td>
<td>85</td>
</tr>
<tr>
<td>My teachers think I can learn.</td>
<td>15</td>
<td>4.64</td>
<td>0.59</td>
<td>85</td>
</tr>
</tbody>
</table>
Student Perceptions: Happy Valley R-IX School District

6.3.1.6 The instructional strategies scale from the student (grade 6 and older) Advance Questionnaires identifies the degree to which teachers use instructional strategies that research indicates are likely to result in improved student learning.

The Student scale for Instructional Strategies consists of seven questions.

*What can we observe from this scale?*
<table>
<thead>
<tr>
<th>Hill Top Students</th>
<th>percent</th>
<th>mean</th>
<th>std _dev</th>
<th>n</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am asked to identify similarities and differences.</td>
<td>29</td>
<td>3.04</td>
<td>1.02</td>
<td>27</td>
</tr>
<tr>
<td>I am asked to revise or correct errors in my work.</td>
<td>3</td>
<td>2.58</td>
<td>1.14</td>
<td>27</td>
</tr>
<tr>
<td>I am asked to summarize new material.</td>
<td>7</td>
<td>2.52</td>
<td>1.05</td>
<td>27</td>
</tr>
<tr>
<td>I am asked to use pictures, graphs, maps, or charts to present my information.</td>
<td>3</td>
<td>2.31</td>
<td>0.84</td>
<td>27</td>
</tr>
<tr>
<td>I am given opportunities to present what I have learned to other students.</td>
<td>21</td>
<td>2.74</td>
<td>0.94</td>
<td>27</td>
</tr>
<tr>
<td>I am required to take notes.</td>
<td>4</td>
<td>2.44</td>
<td>0.89</td>
<td>27</td>
</tr>
<tr>
<td>My teachers place students in small groups.</td>
<td>43</td>
<td>3.11</td>
<td>0.97</td>
<td>27</td>
</tr>
</tbody>
</table>
THE MSIP 4TH CYCLE CLASSROOM OBSERVATION TOOL:
A New Way To Examine Prevailing Instructional Practice
MSIP CLASSROOM OBSERVATION

“LOOK FORS”

(As with the AQ, based on latest effective schools research by Robert Marzano, MCREL, and others)
“LOOK FORS”

- Differentiated instruction
- Instructional delivery methods
- Instructional strategies
- Level of engagement
- Depth of knowledge (higher order thinking)
“LOOK FORS”

- Classroom learning environment
- Instructional climate
- Student work displayed
- Technology use
Implications Of Classroom Observation Data

- What is prevailing instructional practice now?
- What does the research say about instructional strategies and the effect on student performance?
- Is our professional development bringing about changes in instruction?
PERCEPTUAL DATA COLLECTION TECHNIQUES

- Survey/Questionnaires (web-based or traditional paper forms)
- Focus groups
- Interviews
- Town hall meetings
- Clicker activity
- Colored dots to prioritize and categorize
PERFORMANCE DATA
MSIP Performance Standards/APR

- MAP
- ACT
- Advanced courses
- Career education courses
- College placement
- Career education placement
- Attendance
- Graduation rate
Sources: Performance Data

- Annual Performance Report (APR)
- Disaggregated with Multiple Years
- MAP Index by Subject Area
- Attendance
- Graduation Rate
- College and Career Preparation Indicators
Annual Performance Report (APR)

• Explore the district APR in the handouts
• There is valuable information in the front section, but don’t neglect the “rest of the story.”
Student Growth versus 2007 Student Achievement by Free/Reduced Lunch Percentage

- Sustaining
- Excelling
- Underperforming
- Improving

Legend:
- Percent Free/Reduced Lunch
  - Less than 20 percent
  - 20 to 40 percent
  - 40 to 60 percent
  - 60 to 80 percent
  - More than 80 percent

- School Size
  - 50 Students
  - 100 Students
  - 200 Students
  - 500 Students
  - 1,000 Students
CONCLUDING THOUGHTS YOURS AND OURS

• What about leadership?
• How can we make data-based decision making for boards of education more accessible and meaningful?
Leadership:

Marzano indicates that leaders create a purposeful community—

“One with the collective efficacy and capacity to develop and use assets to accomplish goals that matter to all community members through agreed-upon processes.”

Not just for school, but the entire community enterprise
FACULTY: Instructional leadership explains 5.8% of the variance in communication arts achievement.

- Race and SES: 32.7%
- Instructional Leadership: 5.8%
- Other: 61.5%
Instructional Leadership Scale (Faculty)

1. The mission of this school is clearly defined.
2. All staff in our school hold high expectations for student learning.
3. There are open channels of communication among students, staff and administrators.
Data Axioms

• Our job is not the mindless accumulation of data, rather the prudent reduction of unnecessary data

• Averages don’t tell you much about individuals

• Two data points do not a trend make

• Always remember it isn’t the numbers that are important, it is the people