Data-Driven Decision-Making for Effective School Leadership

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Asian Psychological Services and Assessment

Association of Christian Schools International – Philippines
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Who are the school leaders?

School Heads
Assistant Principals
Faculty
Non-academic Staff
School Boards
Principals
Middle managers
Guidance Counselors
Others???

RMSClemeña, ACSI Educational Summit, 23 July 2016
TRENDS IN EDUCATION

- Accountability
- Standards Based Movement
- Achievement Gap - Equity / Access
- Retention
- Accountability
- No Child Left Behind (NCLB)
- School Safety
- K to 12
Data-Driven Decision Making (DDDM)

“Data-driven decision-making is about gathering data to understand if a school or district is meeting its purpose and vision.”

Data-Driven Decision Making (DDDM)

- Collecting data
- Analyzing data
- Reporting data
- Using data for school improvement
- Communicating through data
Data-Based Decision Making (DBDM)

DBDM is “the process of collecting, analyzing, reporting, and using data for school improvement.”

---Dahlkemper, 2002, p. 1
Uses of DDDM

- Narrow achievement gaps between student subgroups
- Improve teacher quality
- Improve curriculum
- Share best practices among schools and districts
- Communicate education issues more effectively with key stakeholders
- Promote parental involvement in the education process
- Increase dialogue within the educational community
ACTIVITY

1. Take a few moments, and create a list of the various types of data that you collect in your school.

2. How have you used these data?

3. What happened as a result of your using these data?
There are 2,000 students enrolled in your school this year, compared to 1,800 last year...

The board passing rate of your graduates is below the national passing average...
What will you do with these data?
Essential Questions:

- How Has Student Achievement Increased as a Result of What Principals Do?
- Are Students More Engaged in School as a Result of What School Administrators Do?
Paradigm Shift

From:
Monitoring only *process* and measuring *services* delivered.

To:
Focusing on *results* and measuring *outcomes* of our programs and services.
The Importance of Data

Data can help us:
• Replace hunches and hypotheses with facts concerning what changes are needed
• Identify the root causes of problems, so we can solve the problem and not the symptom
• Assess needs to target our services on important issues
• Determine if we are “walking our talk”

The Importance of Data

Data can help us:
• Understand the impact of efforts, processes, and progress
• Answer the question for our community: “What are we getting for our investment in our children?”
• Continuously improve all aspects of the learning organization

The Importance of Data

Data can help us:
• Measure student progress
• Measure program effectiveness
• Assess instructional effectiveness
• Guide curriculum development
• Allocate resources wisely
• Promote accountability
• Report to the community
• Meet reporting requirements
• Maintain educational focus
• Show trends (but not necessarily solutions)

---American Association of School Administrators. Using Data to Improve Schools: What’s Working
The Importance of Data

Data do not help:

• If the data are not valid and reliable
• If appropriate questions are not asked after reviewing the data
• If data analysis is not used for making wise decisions

*Using Data to Improve Schools: What’s Working*
Where do we begin?

Seven Questions:
1. What is the purpose/mission of the school?
2. What do you expect students to know and be able to do by the time they leave the school? (Standards)
3. What do you expect students to know and be able to do by the end of each semester? (Benchmarks)

Where do we begin?

Seven Questions:

4. How well will students be able to do what they want to do with the knowledge and skills they acquire by the time they leave school? (*Performance*)

5. Why are you getting the results you are getting? Why are you not getting the results you want? (*School Processes*)

Where do we begin?

Seven Questions:

6. What would your school and educational processes look like if your school were achieving its purpose, goals, and expectations for student learning? 
   *(Vision)*

7. How will you use the data you gather? 
   *(Implementation)*

Key considerations when formulating questions

• Are goals for student achievement based on data elements aligned with what the teachers teach?
• What are the best indicators of student achievement upon which the school should base its decisions?
• What indicators of student achievement are collected regularly throughout the year so that informed decision-making can occur?

ACTIVITY: Discussion

• What is the purpose of your school?
• What is the purpose for collecting data at your school?
• How do you want to use the data that will be collected?
• What are the roadblocks (i.e., people, products, reasons) to collecting data at your school?

ACTIVITY: Discussion

- What are the roadblocks to analyzing data at your school?
- What are the roadblocks to using data at your school?
- How can you "get rid of" those roadblocks so data can be used on a systemic and continuous basis?

We exist to effect change in students:

**Acquire**
- Knowledge
- Skills
- Attitude

**Improve**
- Attendance
- Behavior
- Academic Achievement
“Collecting data without purpose is meaningless.”

TYPES OF DATA THAT ASSIST SCHOOLS IN PLANNING FOR AND SUSTAINING SYSTEMIC REFORM:

- Demographics
- Attendance/enrollment
- Drop-out/graduation rates
- Assessments of current teaching practices
- Teachers’, students’, graduates’, administrators’, and parents’ perceptions of the learning environment
- In-house testing
- Student achievement
- Business and community needs
- Problem analyses
- Cost-benefit analyses
- Ongoing assessments of progress

Indicators of student performance

- Test scores
- Graduation rates
- Attendance rates
- Promotion rates
- Rates of participation in co-curricular activities (including community service)
FOUR MAJOR CATEGORIES OF DATA

I. Demographics

II. Perceptions

III. Student Learning

IV. School Processes
<table>
<thead>
<tr>
<th>INTERACTIONS</th>
<th>CAN TELL US—</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Two-way Interactions</strong></td>
<td></td>
</tr>
<tr>
<td>• demographics by student learning</td>
<td>• if subgroups of students perform differently</td>
</tr>
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<td></td>
<td>on student learning measures</td>
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<tr>
<td>• demographics by perceptions</td>
<td>• if groups of students are experiencing school</td>
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<td></td>
<td>differently</td>
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<tr>
<td>• demographics by school processes</td>
<td>• if all groups of students are represented in</td>
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<td>the different programs and processes offered by</td>
</tr>
<tr>
<td></td>
<td>the school</td>
</tr>
<tr>
<td>• student learning by school processes</td>
<td>• if different programs are achieving similar</td>
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<td>student learning results</td>
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<tr>
<td>• student learning by perceptions</td>
<td>• if student perceptions of the learning</td>
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<td></td>
<td>environment have an impact on their learning</td>
</tr>
<tr>
<td>• perceptions by school processes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• if people are perceiving programs and</td>
</tr>
<tr>
<td></td>
<td>processes differently</td>
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</tbody>
</table>
### Three-way Interactions

<table>
<thead>
<tr>
<th>Three-way Interactions</th>
<th>Four-way Interactions</th>
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</thead>
<tbody>
<tr>
<td>• demographics by student learning by perceptions</td>
<td>• the impact demographic factors and attitudes about the learning environment have on student learning</td>
</tr>
<tr>
<td>• demographics by student learning by school processes</td>
<td>• what processes or programs work best for different groups of students measured by student learning results</td>
</tr>
<tr>
<td>• demographics by perceptions by school processes</td>
<td>• what programs or processes different students like best, or the impact different programs or processes have on student attitudes</td>
</tr>
<tr>
<td>• student learning by school processes by perceptions</td>
<td>• the relationship between the processes students prefer and learning results</td>
</tr>
<tr>
<td>• student learning by school processes by perceptions</td>
<td>• what processes or programs have the greatest impact on different groups of students' learning, according to student perceptions and as measured by student learning results</td>
</tr>
</tbody>
</table>
1. Conduct an information inventory/audit
   - What do you want to learn?
   - What data have you collected?
   - What other data do you need to collect?
     • Quantitative
     • Qualitative
   - How frequently will you collect data?

2. Standardize data management

- Eliminate paper systems
- Enter all data directly into compatible computer systems and across networks,
- Organize data sets with universal keys.

3. Analyze the data

Key Analysis Techniques

- Disaggregation
- Longitudinal data
- Cross-tabulation

Data don’t make any sense, we will have to resort to statistics.
DDDM System
Implementation Steps

4. Strive for continuous improvement
   • make changes
   • define new strategies
   • benchmarking

5. Communicate results

The Inquiry Cycle

Designing a Data Driven Instructional Program

- Implementing programs based on national and local needs
- Using data to determine directions
- Measuring results
- Sharing successes
Interpreting Data

First-Layer Disaggregations

- How many students are there?
- Male vs. female
- Limited English Proficiency (LEP) vs. non-LEP
- Previous education (private vs. public)

Interpreting Data

Second-Layer Disaggregations
• How have the demographics changed over time?
• Increases vs. decreases in categorical variables

Third-Layer Disaggregations
• What percentage of students are gifted, and are they equally distributed among genders and ethnicities?

Interpreting Data

Fourth-Layer Disaggregations

• How has the enrollment of LEP students entering the building changed over the years?
• Do students with higher attendance get better grades?
This is the critical point of data: It’s not necessarily the answers that are most important; it’s the discussion that occurs and the questions that are asked because of the data.

— Karen Bates, superintendent, Lake Washington (Wash.) School District
You now ask yourself…
How are students different as a RESULT of the instructional program?
Data-Driven Program Needs:

- Vision = Social Justice
- Mission = Access and Equity
- Content = Data-Driven
- Service = Delivered Systemically
- Skill = Knowing How
- Results = Close The Achievement Gap
ASSESSING NEEDS

Needs are the discrepancies between what is: _desired_... and what is _currently being achieved_.

What do the data tell you?
In God we trust; everyone else, bring and utilize data.
School Leaders’ Efforts Can:

• Increase numbers of students in some courses
• Help ALL students have access to the entire curriculum
• Lower dropout rates
• Raise attendance rates
• Reduce retention rates, and

Help Schools Get to Proficiency
Using Data to Plan Interventions and Change Systems
School Improvement Goals

Achieve Equity and Social Justice for Students

Increase Student Learning and Achievement

School Counseling Leadership Institute. Amherst, MA. July 15, 2003
Data Driven School Counseling Programs

70% Attendance Rate for Low SES Students

Student Focused Interventions

--- School Counseling Leadership Institute. Amherst, MA. July 15, 2003
Data Driven School Counseling Programs

70% Attendance Rate for Low SES Students

System Focused Interventions

- Disaggregate Data by Teacher
- Lead Task Force
- Lead Advisory Training
- Change/Daily Schedule
- Student Focus Groups
- Advocate for Task Forces
- Team with Parents & Community
- Advisory Program
- Change/Influence Attendance Policies

---School Counseling Leadership Institute. Amherst, MA. July 15, 2003
What are Systems?

- Classroom
- School
- Family
- Outside Agencies
- Community
- Culture
- World

---School Counseling Leadership Institute. Amherst, MA. July 15, 2003
Systemic Change Arenas

- Attitudes
- Policies
- Practices

---School Counseling Leadership Institute. Amherst, MA. July 15, 2003
Over-Riding Principles

• Act with Purpose
• Act Ethically
• Keep Lines of Communication Open
• Keep Your Efforts Visible
• Remain Hopeful
• Think Ahead
• Work Collaboratively
• Remember Advocating for Change is a Long Process

---School Counseling Leadership Institute. Amherst, MA. July 15, 2003
Specific Strategies to Spur Systemic Change

• Challenging Low Expectations
• Influencing Course Enrollment Patterns
• Providing Needed Supports for Student Learning
• Raising Student Aspirations
• Influencing Instructional Programs
• Supporting Accountability

---School Counseling Leadership Institute. Amherst, MA. July 15, 2003
ACTIVITY

Problem: Low Scores on the National Student Achievement Test

- Brainstorm student focused interventions
- Brainstorm system focused interventions

---School Counseling Leadership Institute. Amherst, MA.
July 15, 2003
Data-Driven Decision Makers
Think and Behave Differently

Proactively Rather Than Reactively

Collaboratively Rather Than in Isolation

Both Individually and Systemically

---School Counseling Leadership Institute. Amherst, MA. July 15, 2003
Courage, Courage, Courage!!

Not everything that is faced can be changed, but nothing can be changed unless it is faced

James Baldwin
Using APSA Test Data to Plan Interventions and Change Systems
APSA Comprehensive Reports

1. School Performance Profile
2. Class Performance Report
3. Student Performance Report
   1. Scaled Ability Score (SAS)
   2. Descriptive Score (Proficient, etc.)
   3. Percentile Rank
   4. Areas of Mastery and Deficiency
Sample Standards-Based Test Results

School Performance Report (ScPR)

Asian Psychological Services & Assessment Corp.
Algebra (School Performance Report)
Date of Test: February 05, 2003
XYZ High School
Section Year Level 1st

Distribution of Students Based on Proficiency Level

<table>
<thead>
<tr>
<th>Proficiency Level</th>
<th>freq</th>
<th>% dist</th>
<th>graph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not met standards</td>
<td>0</td>
<td>0%</td>
<td></td>
</tr>
<tr>
<td>Progressing towards standards</td>
<td>5</td>
<td>24%</td>
<td></td>
</tr>
<tr>
<td>Proficient</td>
<td>13</td>
<td>62%</td>
<td></td>
</tr>
<tr>
<td>Highly Proficient</td>
<td>3</td>
<td>14%</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>21</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

Comparative Distribution Curves: Section, School, Country vs. Standards

Legend:
- Section
- School
- Country

Scaled Ability Score
Percentile (%ile)

Legend:
- Standards
- Country
- School
- Section

Qualitative Description

<table>
<thead>
<tr>
<th>Name</th>
<th>SAS</th>
<th>Standards</th>
<th>%ile Rank</th>
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</thead>
<tbody>
<tr>
<td>DELA CRUZ, JUAN A.</td>
<td>84</td>
<td>64</td>
<td>35</td>
</tr>
<tr>
<td>DELA CRUZ, JUAN B.</td>
<td>76</td>
<td>33</td>
<td>52</td>
</tr>
<tr>
<td>DELA CRUZ, JUAN C.</td>
<td>87</td>
<td>77</td>
<td>91</td>
</tr>
<tr>
<td>DELA CRUZ, JUAN D.</td>
<td>80</td>
<td>30</td>
<td>71</td>
</tr>
<tr>
<td>DELA CRUZ, JUAN E.</td>
<td>78</td>
<td>43</td>
<td>64</td>
</tr>
<tr>
<td>DELA CRUZ, JUAN F.</td>
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<td>64</td>
<td>84</td>
</tr>
<tr>
<td>DELA CRUZ, JUAN G.</td>
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<td>80</td>
<td>93</td>
</tr>
<tr>
<td>DELA CRUZ, JUAN H.</td>
<td>84</td>
<td>67</td>
<td>87</td>
</tr>
<tr>
<td>DELA CRUZ, JUAN I.</td>
<td>93</td>
<td>90</td>
<td>97</td>
</tr>
<tr>
<td>DELA CRUZ, JUAN J.</td>
<td>87</td>
<td>77</td>
<td>35</td>
</tr>
<tr>
<td>DELA CRUZ, JUAN K.</td>
<td>83</td>
<td>77</td>
<td>35</td>
</tr>
</tbody>
</table>

Date of Test: February 05, 2003
XYZ High School
Section Year Level 1st
**Sample Standards-Based Test Results**

**Student Performance Report (SPR)**

- **Name of Test:** Algebra
- **Name of School:** XYZ High School
- **Date of Test:** March 04, 2003
- **Level:** 1st Section 1-A

<table>
<thead>
<tr>
<th>Name: DELA CRUZ, JUANA A.</th>
<th>Raw Score: 29</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scaled Ability Score (SAS): 84</td>
<td>Qualitative Description: Proficient</td>
</tr>
<tr>
<td><strong>Your Percentile Rank (Country):</strong> 84%ile</td>
<td><strong>School Mean Scaled Ability Score:</strong> 87</td>
</tr>
<tr>
<td><strong>Your Percentile Rank (Standards-Based):</strong> 64%ile</td>
<td><strong>Your Percentile Rank (School):</strong> 35%ile</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Score</th>
<th>Section</th>
<th>School</th>
<th>Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpretation of graph</td>
<td>Correct</td>
<td>86%</td>
<td>85%</td>
<td>82%</td>
</tr>
<tr>
<td>Solving problems involving numbers</td>
<td>Correct</td>
<td>90%</td>
<td>94%</td>
<td>75%</td>
</tr>
<tr>
<td>Finding the greatest common factor</td>
<td>Correct</td>
<td>76%</td>
<td>89%</td>
<td>72%</td>
</tr>
<tr>
<td>Simplifying radicals</td>
<td>Correct</td>
<td>90%</td>
<td>83%</td>
<td>68%</td>
</tr>
<tr>
<td>Solving problems involving geometry</td>
<td>Correct</td>
<td>57%</td>
<td>62%</td>
<td>67%</td>
</tr>
<tr>
<td>Applying property of application</td>
<td>Correct</td>
<td>86%</td>
<td>93%</td>
<td>66%</td>
</tr>
<tr>
<td>Finding the difference of rational expression</td>
<td>Correct</td>
<td>90%</td>
<td>91%</td>
<td>64%</td>
</tr>
<tr>
<td>Solving age problem</td>
<td>Wrong</td>
<td>67%</td>
<td>77%</td>
<td>60%</td>
</tr>
<tr>
<td>Finding the average of ungrouped data</td>
<td>Correct</td>
<td>48%</td>
<td>55%</td>
<td>58%</td>
</tr>
<tr>
<td>Simplifying exponents</td>
<td>Correct</td>
<td>76%</td>
<td>69%</td>
<td>56%</td>
</tr>
<tr>
<td>Finding the factors of a perfect binomial</td>
<td>Correct</td>
<td>86%</td>
<td>88%</td>
<td>54%</td>
</tr>
<tr>
<td>Applying property of application</td>
<td>Correct</td>
<td>86%</td>
<td>86%</td>
<td>54%</td>
</tr>
<tr>
<td>Adding polynomials</td>
<td>Correct</td>
<td>76%</td>
<td>82%</td>
<td>52%</td>
</tr>
<tr>
<td>Converting common measures</td>
<td>Correct</td>
<td>86%</td>
<td>86%</td>
<td>52%</td>
</tr>
<tr>
<td>Multiplying polynomials</td>
<td>Correct</td>
<td>86%</td>
<td>86%</td>
<td>52%</td>
</tr>
<tr>
<td>Solving proportions</td>
<td>Correct</td>
<td>86%</td>
<td>86%</td>
<td>52%</td>
</tr>
<tr>
<td>Simplifying algebraic expressions</td>
<td>Correct</td>
<td>40%</td>
<td>61%</td>
<td>51%</td>
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<tr>
<td>Finding the equation given a point and its slope</td>
<td>Long</td>
<td>57%</td>
<td>41%</td>
<td>17%</td>
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<tr>
<td>Solving work problems</td>
<td>Correct</td>
<td>29%</td>
<td>19%</td>
<td>17%</td>
</tr>
<tr>
<td>Solving age problem</td>
<td>Wrong</td>
<td>14%</td>
<td>35%</td>
<td>14%</td>
</tr>
</tbody>
</table>

**Legend:**
- Section
- School
- Country
- Standards

**Graph:**
- **Scaled Ability Score**
- **Percentile (%ile)**
- **Your SAS**
# Asian Psychological Services & Assessment Corporation

## Assessment for High School Potential

### INDIVIDUAL REPORT

<table>
<thead>
<tr>
<th>Name</th>
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<table>
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<th>Section</th>
<th>Year Level</th>
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### ACHIEVEMENT SAS (AchSAS) & APTITUDE SAS (AptSAS)

<table>
<thead>
<tr>
<th>Subject</th>
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<tr>
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<td>Math</td>
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<tr>
<td>Science</td>
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<tr>
<td>Verbal</td>
<td></td>
</tr>
<tr>
<td>Abstract</td>
<td></td>
</tr>
<tr>
<td>Quantitative</td>
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<table>
<thead>
<tr>
<th>SAS Type</th>
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<tbody>
<tr>
<td>Achievement</td>
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</tr>
<tr>
<td>Aptitude</td>
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<table>
<thead>
<tr>
<th>Percentile Rank</th>
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<tbody>
<tr>
<td>Percentile Rank</td>
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</tbody>
</table>

### HIGH SCHOOL POTENTIAL SCORE (AchSAS + AptSAS)

<table>
<thead>
<tr>
<th>Percentile Rank</th>
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### STUDY HABITS INVENTORY

#### Dimensions

- Planning
- Organization
- Time Management
- Meta-cognition
- Response Inhibition
- Self-Regulation of Affect
- Task Initiation
- Flexibility
- Goal Directedness
- Self Regulation

<table>
<thead>
<tr>
<th>Very Weak</th>
<th>Weak</th>
<th>Strong</th>
<th>Very Strong</th>
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</thead>
<tbody>
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<td></td>
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<table>
<thead>
<tr>
<th>Dimension</th>
<th>Weak</th>
<th>Strong</th>
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<tbody>
<tr>
<td>Planning</td>
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<tr>
<td>Organization</td>
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<td>Time Management</td>
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<td>Meta-cognition</td>
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<td>Response Inhibition</td>
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<td>Self-Regulation of Affect</td>
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<td>Task Initiation</td>
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<tr>
<td>Flexibility</td>
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<td>Goal Directedness</td>
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<tr>
<td>Self Regulation</td>
<td></td>
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## TRACKS

<table>
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<th>RECOMMENDATION ACCORDING TO</th>
<th>Achievement and Aptitude</th>
<th>Interest</th>
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<td><strong>1. ACADEMIC TRACK</strong></td>
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<td><strong>3. SPORTS TRACK</strong></td>
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<tr>
<td>Agri-Fishery</td>
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</table>

Note: Check (✓) mark means that your achievement, aptitude, or interest matches the required competencies in the track of specialization.
SAMPLE OF SUMMARY REPORT
XYZ UNIVERSITY
SY 2007-08

STANDARDS-BASED ASSESSMENT
in ENGLISH, MATH & SCIENCE
GRADES 1 - 6 & YEAR 1 - 4

Asian Psychological Services and Assessment Corp.
Making Standards Work!
Grade 3 – Section A

- **Not met standards**
- **Progressing towards standards**
- **Proficient**
- **Highly Proficient**

N = 45  MSAS = 87

- 1 - 2 %
- 5 - 11 %
- 22 - 49 %
- 17 - 38 %
### Grade 3 - Section A - Math

<table>
<thead>
<tr>
<th>Category</th>
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<tbody>
<tr>
<td>Number, Operations: Expanded form</td>
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<tr>
<td>Data Analysis and Probability: Graphs</td>
<td>71%</td>
</tr>
<tr>
<td>Geometry: Polygons</td>
<td>68%</td>
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<tr>
<td>Geometry: 2D shapes</td>
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</tr>
<tr>
<td>Number, Operations: Divisibility</td>
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<td>Geometry: Basic Concepts</td>
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<tr>
<td>Number, Operations: Roman numerals</td>
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<tr>
<td>Number, Operations: Decimals</td>
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<td>Number, Operations: Fractions</td>
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<tr>
<td>Algebra: Number patterns</td>
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<td>Number, Operations: Division</td>
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<td>Number, Operations: Estimation</td>
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<tr>
<td>Data Analysis and Probability: Use data</td>
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</table>
Mean SAS (by Section)
Math Grade 3

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<thead>
<tr>
<th>Section</th>
<th>CHARITY</th>
<th>FELICITY</th>
<th>LOVE</th>
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<tr>
<td>Mean SAS</td>
<td>70</td>
<td>74</td>
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</table>

The chart shows the mean SAS scores for different sections in Math Grade 3.
Mean SAS COMPARISON
ENGLISH, MATH & SCIENCE
GRADE 1

MABAIT

English Math Science

87 82 85

50 60 70 80 90 100 110

ENGLISH
MATH
SCIENCE

English Math Science
Comparison of Pretest & Posttest
SY. 2006 - 2007
Mean SAS Comparison of Pretest & Posttest
Grade 1 - MABAIT

<table>
<thead>
<tr>
<th></th>
<th>ENGLISH</th>
<th>MATH</th>
<th>SCIENCE</th>
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<tr>
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<td>76</td>
<td>80</td>
<td>79</td>
</tr>
<tr>
<td>POSTTEST</td>
<td>87</td>
<td>82</td>
<td>85</td>
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</table>
TRENDS OF STUDENTS’ PERFORMANCE

![Bar chart showing trends in English, Math, and Science performance from 2001 to 2004.](chart.png)
## Asian Psychological Services Assessment Inc. Performance of APSA Client Schools by Level and by Subject Area SY 2015-2016

### ENGLISH

<table>
<thead>
<tr>
<th>Level</th>
<th>No. of Schools</th>
<th>MSAS</th>
<th>SD</th>
<th>HMSAS</th>
<th>LMSAS</th>
<th>Median</th>
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Asian Psychological Services Assessment Inc. Performance of APSA Client Schools by Level and by Subject Area SY 2015-2016

<table>
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<th>LMSAS</th>
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HOW CAN WE USE THE APSA DATA?
Seven Steps in Using Data in Advocacy and Systems Change

1. Describe the Problem
2. Generate Vision Data
3. Commit To Benchmarks
4. Identify Places to Intervene
5. Select Interventions
6. Evaluate Implementation
7. Monitor Problem Data
Seven Steps in Using Data in Advocacy and Systems Change

1. Describe the Problem
2. Generate Vision Data
3. Commit To Benchmarks
4. Identify Places to Intervene
5. Select Interventions
6. Evaluate Implementation
7. Monitor Problem Data
Using Data

• Use three different independent sources of data to describe the problem:
  – Outcome Data
  – School Process Data
  – Perceptual Data

• Surveys provide information about Perceptual Data
Triangulating

Outcome Data

School Process Data

Perceptual Data

THE PROBLEM
Triangulating

High percentage of Student Failure.

School Process Data

Perceptual Data

THE PROBLEM
Triangulating

THE PROBLEM

High percentage Student Failure

Perceptual Data

Seminars are given on Study Habits and Time Management
Triangulating

High percentage Student Failure

Seminars are given on Study Habits and Time Management

THE PROBLEM

Students Report Teachers are Too Strict With Attendance
Seven Steps in Using Data in Advocacy and Systems Change

1. Describe the Problem
2. Generate Vision Data
3. Commit To Benchmarks
4. Identify Places to Intervene
5. Select Interventions
6. Evaluate Implementation
7. Monitor Problem Data
Generate Vision Data

• Successful Vision Data is:
  – Agreed upon by most members of the system
  – Concrete and specific
  – Measurable
  – Related to student learning outcomes
  – Attainable
  – Tied to a deadline
  – Related to Values and Passion
Generate Vision Data: How to do it

• Start with a description of the status quo
  • What pleases you about the students’ current achievement data?
  • What disturbs you about your students’ current achievement data?

• Generate a quantitative description of achievement data some specific time in the future.
  • What should the data look like in five years?
Seven Steps in Using Data in Advocacy and Systems Change

1. Describe the Problem
2. Generate Vision Data
3. Commit To Benchmarks
4. Identify Places to Intervene
5. Select Interventions
6. Evaluate Implementation
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Seven Steps in Using Data in Advocacy and Systems Change

1. Describe the Problem
2. Generate Vision Data
3. Commit To Benchmarks
4. Identify Places to Intervene
5. Select Interventions
6. Evaluate Implementation
7. Monitor Problem Data
Identify Places to Intervene

• Forces
  – Student
  – Peer
  – School
  – Family
  – Community
  – Culture
Identifying Places to Intervene

- **Data targets**: Quantitative description of targeted problem
- **Forces**: Student, Family, School, Individual, Systemic Forces which impact on that problem
- **Strategies/Interventions**: What we can do to address the forces which impact on the problem (evidence-based)
Identifying Places to Intervene

• **Surveys:**
  – gather demographic information
  – gather opinions
  – obtain feedback, impressions, perceptions

• **Surveys provide information about what people believe.**
Seven Steps in Using Data in Advocacy and Systems Change

1. Describe the Problem
2. Generate Vision Data
3. Commit To Benchmarks
4. Identify Places to Intervene
5. Select Interventions
6. Evaluate Implementation
7. Monitor Problem Data
Select Interventions

• Identify Possible Interventions
  – Individual Interventions
  – Systemic Interventions
• Align with Forces
• Align with Evidence Base
• Identify Expertise and Learning Needs
• Identify Community Resources
• Identify Possible Roadblocks and Resistance
• Write Implementation Plan
Seven Steps in Using Data in Advocacy and Systems Change

1. Describe the Problem
2. Generate Vision Data
3. Commit To Benchmarks
4. Identify Places to Intervene
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Seven Steps in Using Data in Advocacy and Systems Change

1. Describe the Problem
2. Generate Vision Data
3. Commit To Benchmarks
4. Identify Places to Intervene
5. Select Interventions
6. Evaluate Implementation
7. Monitor Problem Data
Step 1

Describe the problem

Achievement gap in MCAS math scores

- 4th grade math
- 6th grade math
- 8th grade math

- NI-F

W
AA
L
MCAS pass rates for 4th grade mathematics in 2008*

<table>
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<td>70%</td>
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<tr>
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<td>70%</td>
</tr>
<tr>
<td>L</td>
<td>70%</td>
</tr>
<tr>
<td>AsA</td>
<td>70%</td>
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</tbody>
</table>

*Can also apply to 6th grade and 8th grade data

Step 2

Generate vision data

Good vision data is

- Agreed upon by many in the system
- Concrete & specific
- Measurable
- Outcome-oriented
- Attainable
- Tied to a deadline
- Related to values

(Carey, 2004)
Step 3

Commit to benchmarks

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<tr>
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<td>14%</td>
<td>28%</td>
<td>42%</td>
<td>56%</td>
<td>70%</td>
</tr>
</tbody>
</table>

MCAS pass rates for 4th grade mathematics

What will this look like over the course of 5 years?
Step 4 Identify places to intervene

- Potential areas
  - Students
  - Peers
  - Teachers
  - Whole school
  - Family
  - Community
  - Culture

“Quality teachers, rigorous curriculum, and standards-based assignments are all variables that literature has shown influences the achievement gap.” (ASCA, 2003)
Step 5

Select interventions

Whole School

Students
  Yearly Progress Pro (Math)

Peers
  Math PALS

Teachers
  Specialized Professional Development
Yearly Progress Pro Math is...

- A computer-based program for monitoring all students’ progress in math
- Aligned to state and national standards
- Linked to data-based management system so teachers can track student performance in real time

www.mhdigitallearning.com

Step 5: Select interventions

Students

Yearly Progress Pro (Math)
YPP Math provides...

- Resources to assist teachers in the classroom
- Curriculum-based assessments delivered weekly to all students
- Instructional exercises for each skill addressed
- Accountability data for decision-making regarding student needs
YPP Math helps educators...

- Identify students in need of additional or different forms of instruction
- Design stronger instructional programs
- Monitor progress of all students toward state/district standards
- Effect better achievement outcomes for students
Math PALS is…

- A structured approach for peer tutoring in math
- Designed to complement existing curricula and instructional methods
- Developed to incorporate research-based tutoring methods
- A recipient of “best practice” status by U.S. Dept. of Ed. Program Effectiveness Panel

http://www.k8accesscenter.org/training_resources/documents/PeerTutoringFinal.pdf
Math PALS encourages...

- **Peer Assisted Learning Strategies (PALS)**
- Student pairs to practice skills in alternating roles of player and coach
- Students to receive step-by-step feedback through peer interactions
- Students to work on different levels and different types of problems
Math PALS research shows...

- Statistically significant increases in math achievement scores
- Improvement in student social skills
- Students’ abilities to create more meaningful memories of concepts
- Academic improvement in both tutor and tutee
Specialized PD means...

- Providing diversity training for teachers
- Providing training in higher-order thinking skills
- Offering incentives for teachers to take classes in their subject areas
- Providing consultation and in-class support for teachers
PD is important because...

- Teachers have significant impact on student learning
- Teacher effectiveness is a factor that can influence students’ gains in achievement more than poverty or per-pupil expenditures
PD research shows that...

- Five aspects of teacher quality can affect student achievement:
  - A teacher’s major
  - Professional development in higher-order thinking skills
  - Diversity training
  - Use of hands-on learning in classroom
  - Focus on higher-order thinking skills in classroom

(Wenglinsky, 2002)
### Step 6: Evaluate implementation

<table>
<thead>
<tr>
<th>Year</th>
<th>students</th>
<th>teachers</th>
<th>school</th>
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<tbody>
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<td>Receive training in YPP</td>
<td>Conduct school climate survey</td>
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<tr>
<td>Year 2</td>
<td>Continue YPP</td>
<td>Receive diversity training</td>
<td>Evaluate YPP; School climate survey</td>
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<tr>
<td>Year 3</td>
<td>Begin Math PALS; Continue YPP</td>
<td>Receive training in Math PALS</td>
<td>Evaluate YPP; School climate survey</td>
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<tr>
<td>Year 4</td>
<td>Continue Math PALS; Continue YPP</td>
<td>Receive training in higher-order thinking skills</td>
<td>Evaluate Math PALS; Evaluate YPP; School climate survey</td>
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<td>Year 5</td>
<td>Continue programs</td>
<td>Receive ongoing PD and support</td>
<td>Evaluate programs annually</td>
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- Annual evaluations will include MCAS results, school climate data, and honor roll data.
- Sporadic classroom visits will be conducted to monitor program implementation.
### Monitor problem data

#### 4th grade English Language Arts vision data

<table>
<thead>
<tr>
<th></th>
<th>Adv-Pro</th>
<th>NI-F</th>
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<tr>
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<tr>
<td>AsA</td>
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<td>30%</td>
</tr>
</tbody>
</table>

- Results from math intervention evaluations will determine decision-making for English Language Arts (e.g. Reading PALS, Renaissance Learning management software for reading & writing akin to YPP)
“We need to be the change we want to see happen. We are the leaders we have been waiting for.”
- Mahatma Gandhi
Without continual growth and progress, such words as improvement, achievement, and success have no meaning.

Benjamin Franklin
References & resources


Useful websites:
- [http://www.mhdigitallearning.com](http://www.mhdigitallearning.com)
- [http://www.k8accesscenter.org/training_resources/documents/PeerTutoringFinal.pdf](http://www.k8accesscenter.org/training_resources/documents/PeerTutoringFinal.pdf)