WELCOME!

DATA ANALYSIS FOR CONTINUOUS SCHOOL IMPROVEMENT

2017 Summer Teaching, Learning and Assessment Institute

Victoria L. Bernhardt
vbernhardt@csuchico.edu
http://eff.csuchico.edu

OUTCOMES

Everyone understands—

- **The Continuous School Improvement (CSI) Framework.**
- **That you can do the work of Continuous School Improvement (CSI) once and use it for everything – Accreditation, Title 1, Accountability . .**
- **What and how data are important for continuous school improvement planning that leads to learning growth for *every* student.**

WHAT IS THE HARDEST PART FROM YOUR PERSPECTIVE?

1. ***Beliefs* that all children can learn.**
2. **Schools *honestly* reviewing their *data*.**
3. ***One vision*.**
4. **O*ne plan* to implement the vision.**
5. **Curriculum, instructional strategies, and assessments *clear and aligned to standards*.**
6. **Staff *collaboration* and *use* of *data* related to standards implementation.**
7. **Staff *professional learning* to work differently.**
8. **Rethinking current structures to *avoid add-ons*.**

THINGS WE KNOW ABOUT IMPROVING STUDENT LEARNING

- **Quality of classroom instruction is the single greatest predictor of student learning and achievement.**
- **Principal leadership is second . . .**

Robert J. Marzano

THINGS WE KNOW ABOUT DATA USE

For data to be used to impact classroom instruction, there must be structures in place, to—

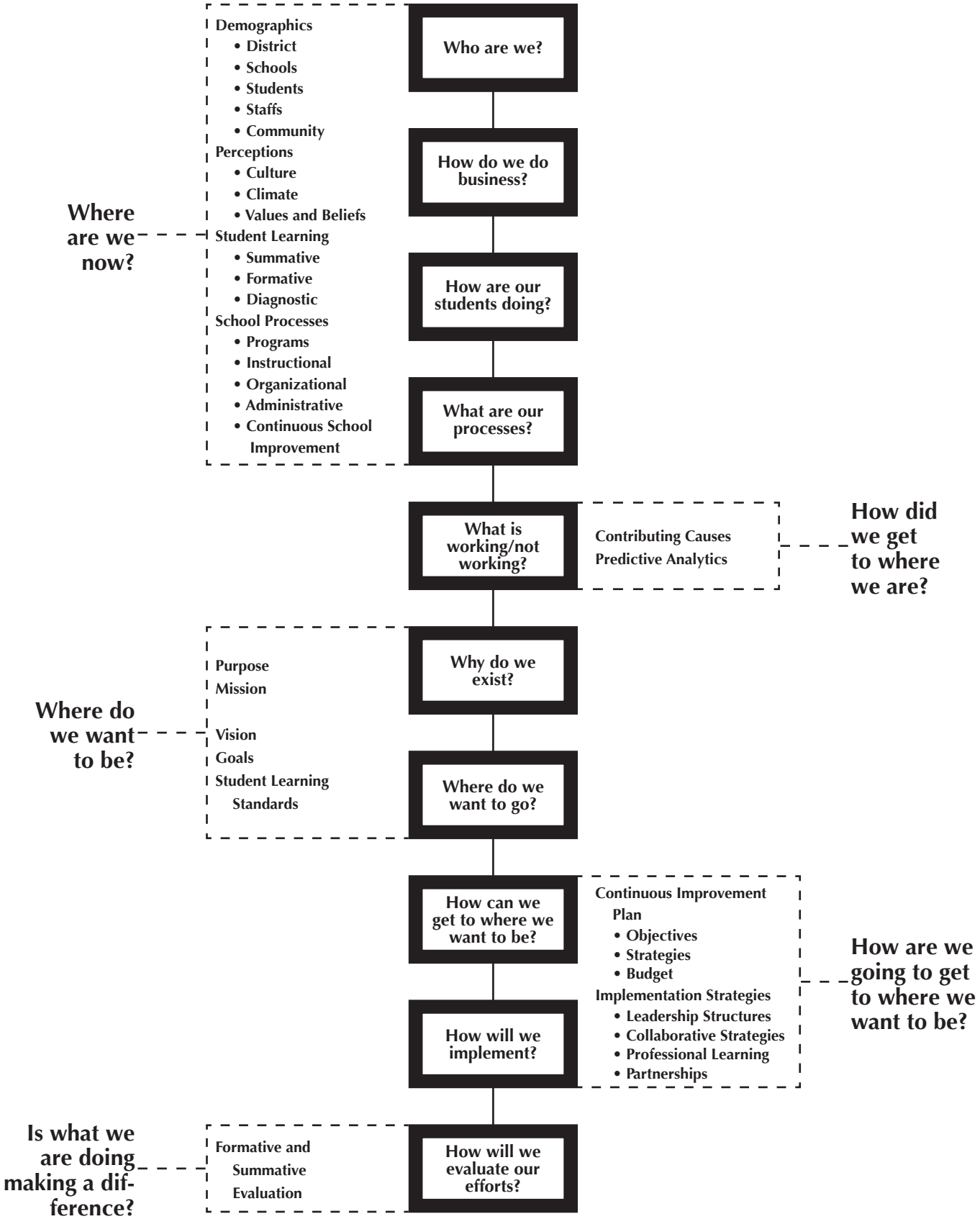
- **Implement a shared schoolwide vision.**
- **Help staff review data and discuss improving processes.**
- **Have regular, honest collaborations that cause *learning*.**

LEARNING DEFINITION

Learning is the process through which experience causes permanent change in knowledge or behavior.

Cognitive Psychology

CONTINUOUS SCHOOL IMPROVEMENT FRAMEWORK

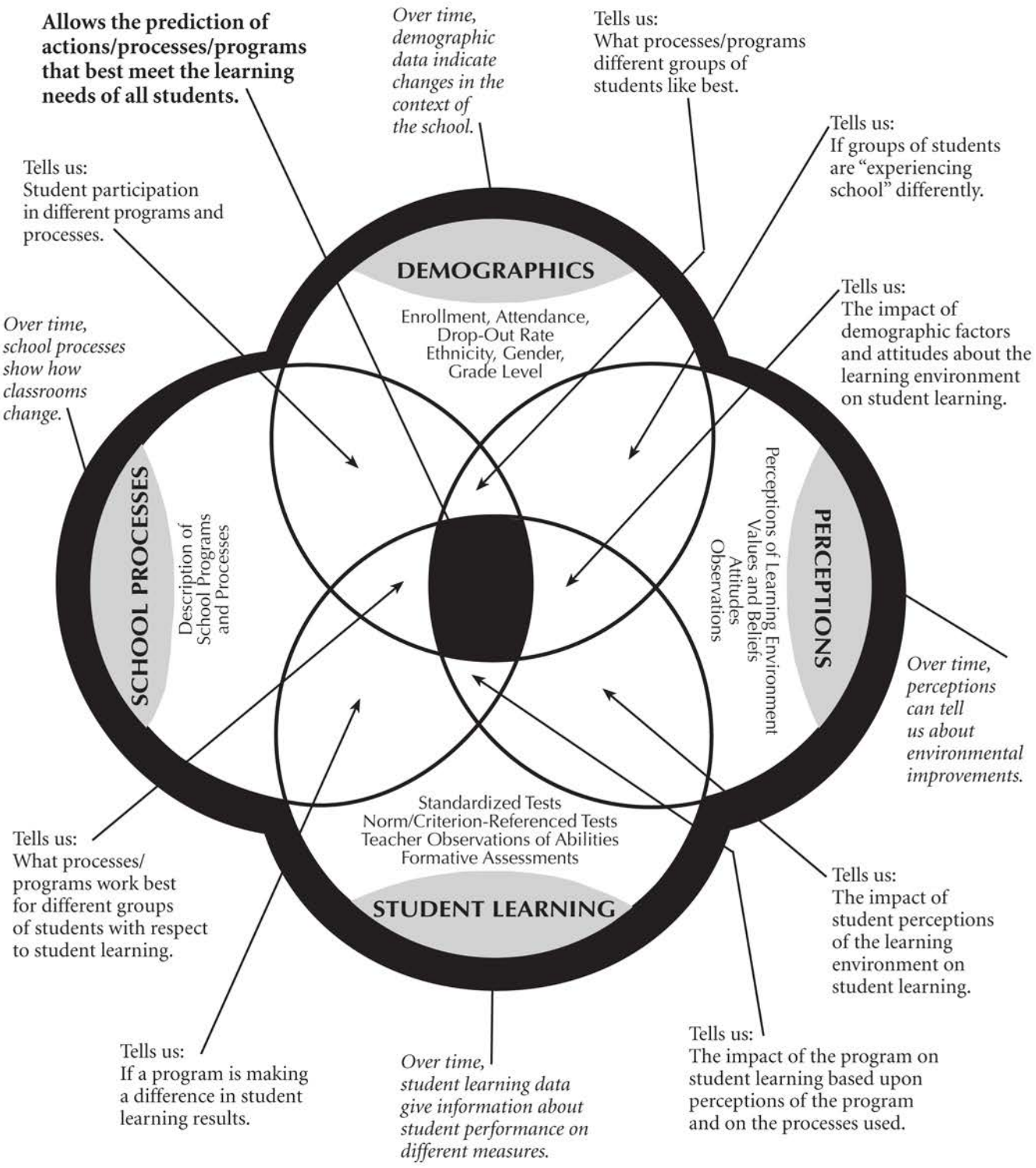


Data Analysis for Continuous School Improvement (3rd ed.), (p. 14). By V.L. Bernhardt, 2013, New York, NY: Routledge. Reproducible.

DIFFERENCES IN ACTIONS BETWEEN SCHOOL FOCUSED ON COMPLIANCE AND COMMITTED TO CONTINUOUS IMPROVEMENT

Key Components	Schools Focused on Compliance	Schools Committed to Continuous School Improvement…
Data Analysis	Blame students for poor results (e.g., our results are not very good because our population lives in poverty). Use student learning data, only, to close gaps. Focus on "Bubble Kids."	Embrace whom they have as students, learn how to meet their needs, and ensure that all achieve. Have all staff use demographic, perceptions, student learning, and school processes data to understand how to— • meet the needs of students, • understand what is working and what is not working, • use what is working to serve all students, and • predict and prevent failures, and optimize successes.
Problem Solving	Use problem solving in a reactive fashion. They tend to add fixes when problems occur.	Prepare staff to know how to problem solve together to get to and eliminate contributing causes, in a proactive fashion.
Vision	Focus only on meeting compliance. Add programs and interventions to what they are already doing when change is needed.	Have a vision about doing whatever it takes to improve teaching and learning. Use data to inform the schoolwide vision that is created, embraced, and implemented by all staff members. The vision clarifies what teachers will teach, how teachers will teach and assess, and how everyone in the organization will treat each other, related to student learning standards. The vision provides the means for strategic, fast action-the scenarios have been played through.
Planning	Write school improvement plans to close gaps related to compliance. School goals are limited to improving test scores versus improving student learning. Reactive to compliance reports, these plans are usually about "fixing the kids" by prescribing add-on interventions.	Proactively write continuous school improvement plans to implement a vision that improves learning for all students and prepares them for college and careers. The plan interweaves the leadership structure, professional learning, and partnerships needed to implement the vision.
Leadership	Have top-down leadership that requires a focus on compliance and closing gaps. Areas of emphasis change as leaders change.	Create shared decision-making structures that support each other as they implement the vision, and improve learning for all students.
Professional Learning	Use professional learning as a carrot and a stick. "If we are failing in this area, everyone has to go to this workshop." Without new information, teachers do the same things over and over and hope for different results.	Understand that collaboration is required to improve teaching and learning. They build structures for all staff to collaborate and learn together. Time is dedicated for collaborative teams to review and make meaning of classroom and schoolwide data, and to discuss and apply options for improving student learning.
Partnerships	Create one-way partnerships with parents, community, and businesses to raise money and get stuff.	Embrace and plan for win-win partnerships as a means of implementing the vision and creating college and career-ready graduates.
Evaluation	Use evaluation when required for external accountability.	Use data to continuously improve all aspects of the learning organization.
Compliance	Focus on what is being measured for compliance purposes only, and are expert at gap analysis. Are content with the status quo as long as it meets compliance requirements.	Focus on creating and improving the learning organization to ensure learning for all students in all subject areas, so all students can be college and career ready. Accountability and compliance are a part of the process, but not the sole focus.

Multiple Measures of Data



Bernhardt, V.L. (2013). Data analysis for continuous school improvement. Third Edition. New York, NY: Routledge. (First Edition, 1998; Second Edition, 2004.) Page 17. Reproducible.

DATA-INFORMED DECISION MAKING

Reasons to Collect and Use Data—

- **Find out where you are**
- **To understand how you got there**
- **Plan**
- **Evaluate**
- **Predict**
- **Clean up your system**

DEMOGRAPHICS ARE IMPORTANT DATA

- **Describe the context of the school and school district.**
- **Help us understand all other numbers.**
- **Are used for disaggregating other types of data.**
- **Describe our system and leadership.**

DEMOGRAPHICS

- **Enrollment**
- **Gender**
- **Ethnicity / Race**
- **Attendance (Absences)**
- **Expulsions**
- **Suspensions**

DEMOGRAPHICS *(Continued)*

- Language Proficiency
- Indicators of Poverty
- Special Needs/Exceptionality
- IEP (Yes/No)
- Drop-Out/Graduation Rates
- Program Enrollment

STAFF DEMOGRAPHICS

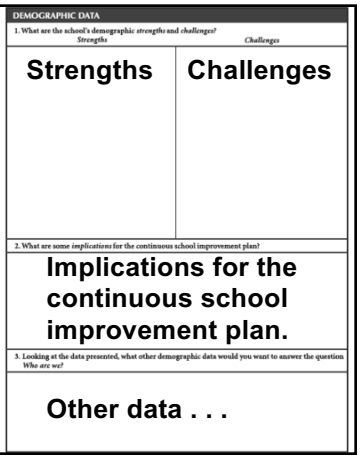
- School and Teaching Assignment
- Qualifications
- Years of Teaching/At this school
- Gender, ethnicity
- Additional Professional Development

ANALYZING DEMOGRAPHIC DATA

- Organize the data to read quickly/easily.
- Start general to more specific data.
- Include all staff in analyzing the data.
- Look for strengths, challenges, and implications for the school improvement plan.
- Independent, small group, large group.

STUDY QUESTIONS

Demographic Data



DEMOGRAPHIC DATA

1. What are the school's demographic *strengths* and *challenges*?

Strengths	Challenges

2. What are some *implications* for the continuous school improvement plan?

Implications for the continuous school improvement plan.

3. Looking at the data presented, what other demographic data would you want to answer the question *Who are we?*

Other data . . .

DEFINITIONS

- **STRENGTHS: Something positive that can be seen in the data. Often leverage for improving a challenge.**
- **CHALLENGES: Data that imply something might need attention, a potential undesirable result, or something out of a school's control.**

EXAMPLE STRENGTHS

- **The school is small.**
- **Our teacher-student ratio is small.**
- **Students are diverse.**

EXAMPLE CHALLENGES

- **Students are diverse.**
- **The number and percentage of students living in poverty has doubled in the past 3 years.**
- **We have a large percentage of students identified for special education services.**

DEFINITIONS

- **IMPLICATIONS FOR THE SCHOOL IMPROVEMENT PLAN are placeholders until all the data are analyzed. Implications are thoughts to not forget to address in the school improvement plan. Implications most often result from *CHALLENGES.***

EXAMPLE CHALLENGES

- **Students are diverse.**
- **The number and percentage of students living in poverty has doubled in the past 3 years.**
- **We have a large percentage of students identified for special education services.**

EXAMPLE IMPLICATIONS FOR THE SCHOOL IMPROVEMENT PLAN

- **Do staff have the professional learning they need to best teach students who live in poverty, are at-risk, and diverse?**
- **Staff need to make sure all processes provide equal access to learning, regardless of background (i.e., homework, assignments that require money, same expectations.)**

WITH YOUR STAFF

Answer questions—

Strengths, Challenges, Implications, other Demographic Data.

- **Independently**
- **In small groups**
- **Merge to whole group**

WHAT ARE THE BENEFITS OF THIS APPROACH?

PERCEPTIONS ARE IMPORTANT DATA

- **Help us understand what students, staff, and parents are perceiving about the learning environment.**
- **We cannot act different from what we value, believe, perceive.**

PERCEPTIONS INCLUDE

- Student, Staff, Parent, Alumni Questionnaires
- Observations
- Focus Groups

STUDENT LEARNING ARE IMPORTANT DATA

- Know what students are learning.
- Understand what we are teaching.
- Determine which students need extra help.

STUDENT LEARNING DATA INCLUDE

- Diagnostic Assessments (Universal Screeners)
- Classroom Assessments
- Formative Assessments (Progress Monitoring)
- Summative Assessments (High Stakes Tests, End of Course)

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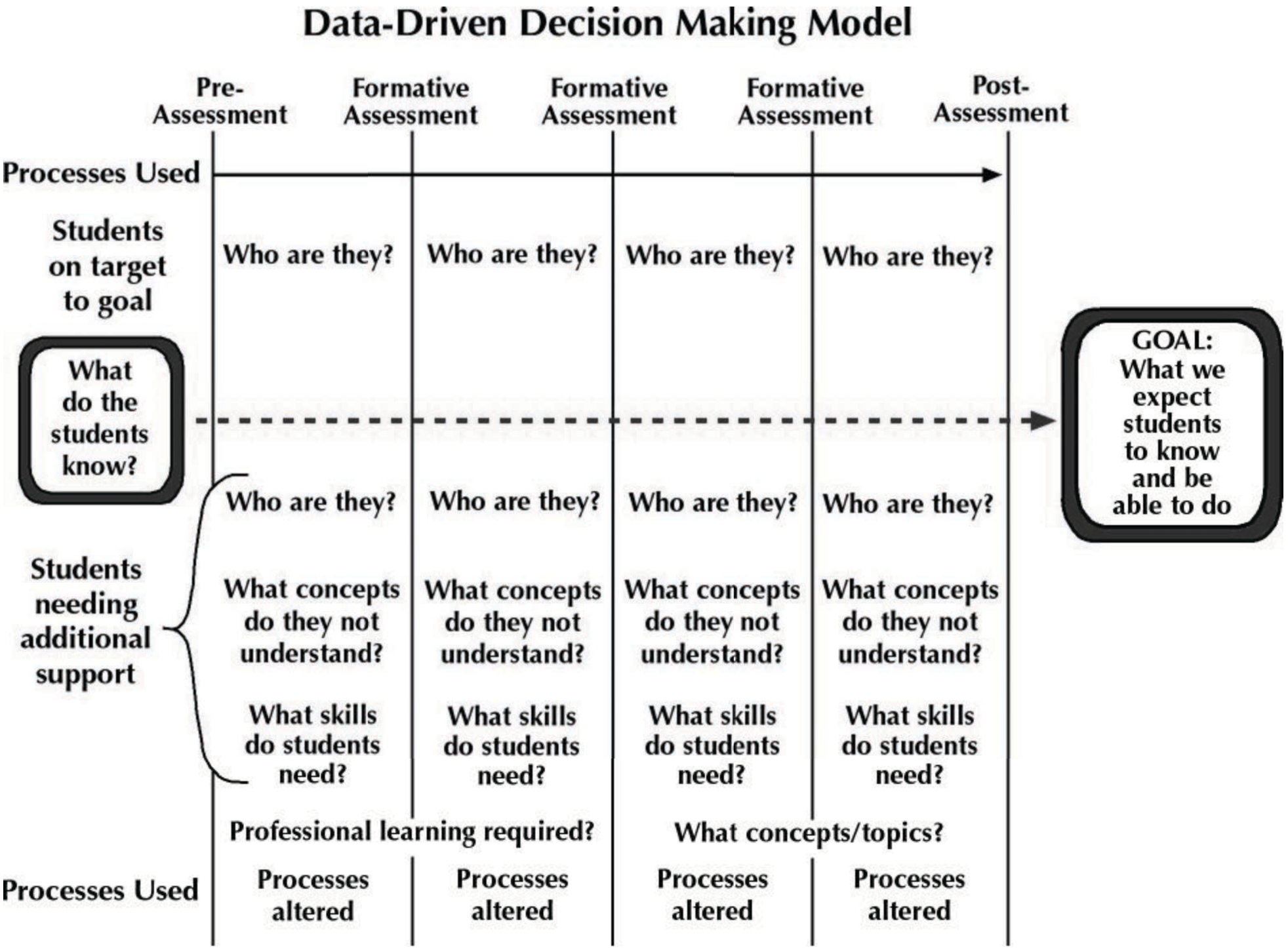

Data-Driven Decision Making Model
Pre-Assessment
Formative Assessment
Formative Assessment
Formative Assessment
Post-Assessment
Processes Used
Students on target to goal
Who are they?
Who are they?
Who are they?
Who are they?
What do the students know?
GOAL: What we expect students to know and be able to do
Who are they?
Who are they?
Who are they?
Who are they?
Students needing additional support
What concepts do they not understand?
What concepts do they not understand?
What concepts do they not understand?
What concepts do they not understand?
What skills do students need?
What skills do students need?
What skills do students need?
What skills do students need?
Professional learning required?
What concepts/topics?
Processes Used
Processes altered
Processes altered
Processes altered
Processes altered

ASSESSMENT INVENTORY

SUBJECT:

ASSESSMENT NAME (e.g., MAP)	TARGETED ASSESSMENT AREA (e.g., Math: Fractions)	DATES OF COLLECTION AND LENGTH OF ASSESSMENT (e.g., date or number of times administered, for how long)	GRADE LEVEL(S)	WHO HAS ACCESS TO RESULTS	USES					COMMENTS
					Screening	Diagnostics	Instruction-Imbedded	Progress Monitoring	Summative	

ANALYZING STUDENT LEARNING DATA

1. **Big Picture: How did we do overall? School District/School/Grade Level/ Subgroups—Gender, ethnicity, SES, etc.**
   - **Over Time: Are we improving?**
   - **Continuum of Learning: Are all grades improving at the same rate? Does each grade build on the previous grade? Are there holes in learning/achievement?**

ANALYZING STUDENT LEARNING DATA

2. **Student Growth: Is every student improving over time? Where are they not growing?**
3. **What do Students Know and Not Know? By standard, item analysis, whatever measures you have, on what topics are students the highest and lowest? What processes need to improve to help every student learn?**

SCHOOL PROCESSES

Schools are perfectly designed to get the results they are getting now. If schools want different results, they must measure and then change their processes to create the results they really want.

SCHOOL PROCESSES EXAMPLES

Instructional Processes	Organizational Processes	Administrative Processes	Continuous School Improvement Processes	Programs
• Academic conversations with students • Classroom assignments (types of tasks, choices, projects, collaboration) • Classroom discussions (teacher talk, student-to-student talk, student-to-teacher talk) • Differentiated instruction • Direct instruction • Flipped classrooms • Grading • Homework • Immersion • Inclusion • Inquiry process • Standards implementation • Student reflection and self-assessment • Technology integration • Tutoring	• Data Teams • Data use • Inquiry process • Instructional coaching • Leadership structure (Leadership teams) • Mentoring • Mission • Parent involvement • Policies and procedures • Professional discussions and support • Professional Learning Communities • Professional reflection • Response to Intervention (RtI) • Teaching assignments • Teacher collaboration • Teacher evaluation • Teacher hiring • Teacher observations • Teacher renewal (professional learning)	• Attendance program • Class sizes • Data collection • Dropout prevention • Discipline strategies • Effective communication • Enrollment in different courses/ programs/program offerings • Graduation strategies • Leadership turnover rates • Number and use of support personnel • Policies and procedures • Retentions • Scheduling of classes • Student groupings • Teacher assignments • Teacher certification • Teacher hiring • Teacher turnover	• Continuous school improvement planning • Contributing cause analysis • Data analysis and use • Evaluation • Leadership • Mission • Professional learning • Partnership • Self-assessment • Vision	• 9th Grade Academy • A+ • Accelerated Reader/Math • Advanced Placement • After School • AVID • At-Risk • Bilingual • Counseling • Dropout Prevention • English as a Second Language • Gifted and Talented • International Baccalaureate • Interventions • PBIS • Science Fairs • Service Learning • Special Education

Implications for the Continuous School Improvement Plan

SCHOOL PROCESSES ARE IMPORTANT DATA

- Tell us about the way we work.
- Tell us how we get the results we are getting.
- Help us know if we have instructional coherence.

SCHOOL PROCESSES DEFINITIONS

- INSTRUCTIONAL: The techniques and strategies that teachers use in the learning environment.
- ORGANIZATIONAL: Those structures the school puts in place to implement the vision.

SCHOOL PROCESSES DEFINITIONS

- ADMINISTRATIVE: Elements about schooling that we count, such as class sizes.
- CONTINUOUS SCHOOL IMPROVEMENT: The structures and elements that help schools continuously improve their systems.
- PROGRAMS: Programs are planned series of activities and processes, with specific goals.

- **Green = this process or program is important to our vision, and everyone is implementing the way it is intended to be implemented.**
- **Yellow = this process or program is important to our vision, and NOT everyone is implementing the way it is intended to be implemented.**
- **Pink = this process or program is optional or a duplication of efforts, and needs to be tweaked to align to our vision.**
- **Red = this process or program is not important to our vision, and should be eliminated.**

"We cannot solve our problems with the same thinking we used when we created them."

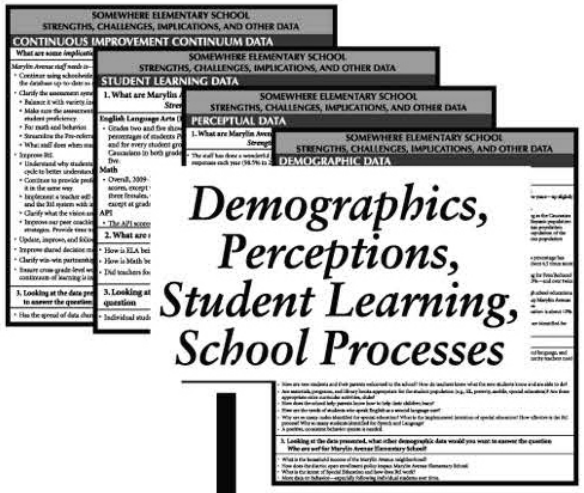
-Albert Einstein

CONTRIBUTING CAUSES:

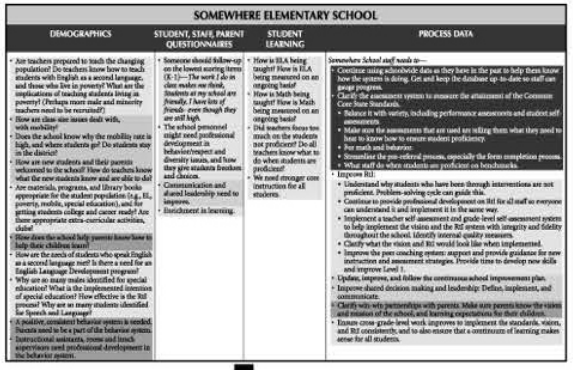
Underlying cause or causes of positive or negative results.

Part 1— Comprehensive Data Analysis to School Improvement Implementation

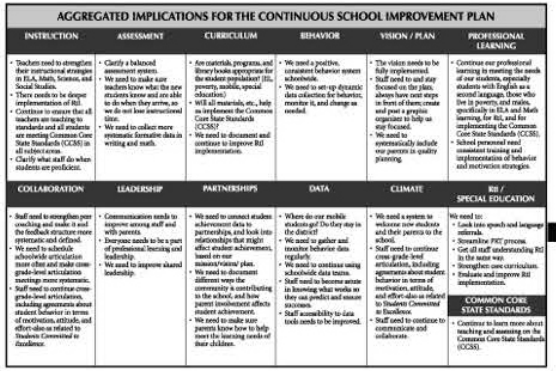
Strengths, Challenges, Implications, and Other Data



Look for Implication Commonalities



Aggregate Implications for the Continuous School Improvement Plan



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How do you know you are getting to the Contributing Causes?

Ask these questions:

- **Would the problem have occurred if the cause had not been present?**
- **Would the problem reoccur if the cause was corrected?**

"However beautiful the strategy, you should occasionally look at the results."

Winston Churchill
Former British Prime Minister
As quoted at INSEAD Knowledge

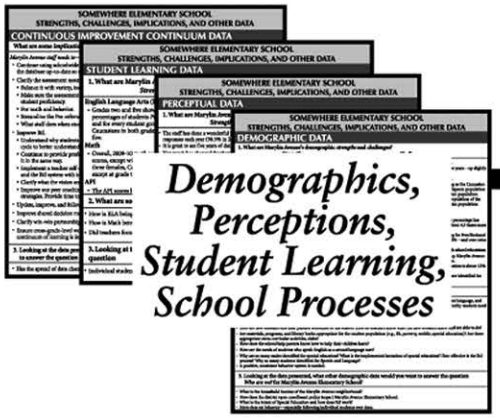
CONTINUOUS IMPROVEMENT AND EVALUATION

"Continuous improvement causes us to think about upstream process improvement; not downstream damage control."

Teams & Tools

COMPREHENSIVE DATA ANALYSIS TO SCHOOL IMPROVEMENT PLANNING

Strengths, Challenges, Implications, and Other Data



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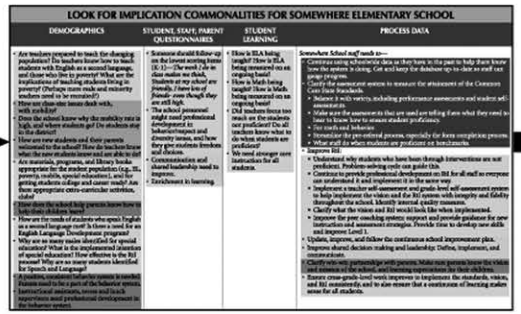

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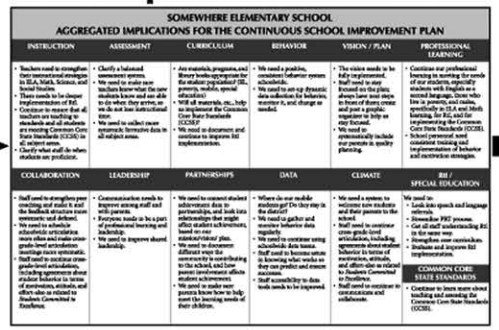
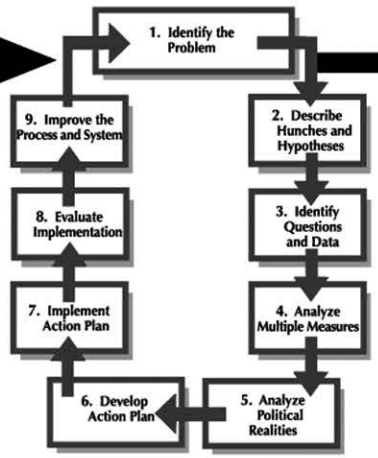
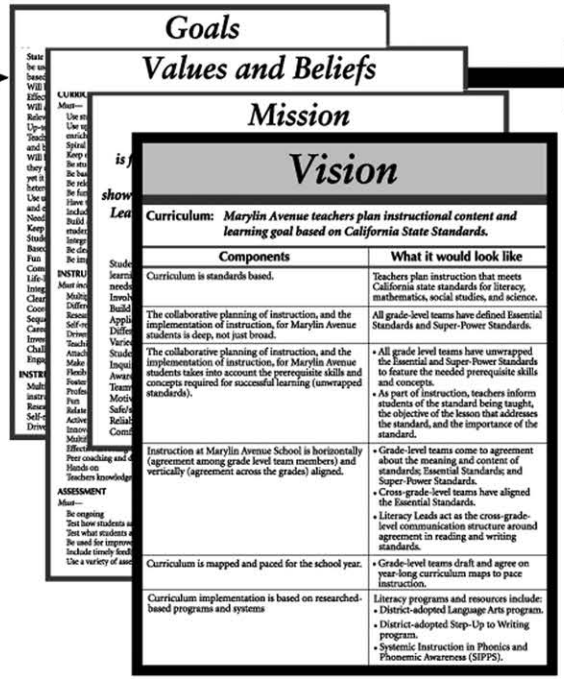


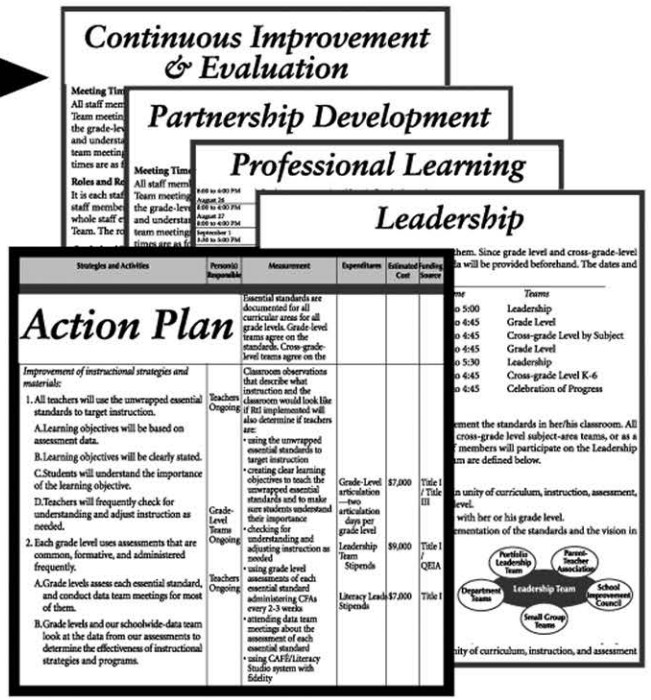
Problem-Solving Cycle



Shared Vision



Continuous School Improvement Plan



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CONTINUOUS IMPROVEMENT AND EVALUATION

- **Evaluate all parts of the system.**
- **Align elements to vision.**
- **Systems thinking.**
- **Next steps.**

Thank you for all you do every day.

Thank you for today!

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