Using Backward Design for School Improvement Planning

presented by

Jay McTighe
6581 River Run
Columbia, MD 21044-6066
phone: (410) 531-1610
e-mail: jmctigh@aol.com
Schooling by Design: Strategies and Tools for Academic Leaders

In this interactive session, we will explore the following essential questions from the book’s chapters (listed below). We’ll examine a variety of practical and proven strategies, processes, tools and examples to assist administrators, teacher leaders and policy makers in guiding and sustaining standards-based educational reform at the school or district level. Participants will have the opportunity to apply SbD principles and strategies while planning for a specific initiative or improvement goal.

Part A: A Vision of Schooling
Chapter 1 – What is the Mission of Schooling?

Chapter 2 – What Should Curriculum Accomplish?

Chapter 3 – How Should we Re-form the Curriculum?

Chapter 4 – How Can we Appropriately Depersonalize Teaching?

Chapter 5 – What’s My Job as Teacher (with students)?

Chapter 6 – What’s My Job as Teacher (without students)?

Chapter 7 – What’s My Job as Academic Leader?

Part B: Action
Chapter 8 – How Should Backward Design apply to School Reform?

Chapter 9 – Stage 1: What are the Desired Results of Reform?

Chapter 10 – Stage 2: What Evidence should we Collect and on What Feedback Should we Act?

Chapter 11 – Stage 3: What Actions Should We Plan?

Chapter 12 – What Habits Must We Confront?
Schooling by Design – Key Elements

- Mission and Philosophy
- Learning Principles
- Curriculum and Assessment System
- Instructional Programs and Practices
- Personnel – Hiring, Appraisal, Development
- Policies, Structures, Governance
- Resource Allocation

Use Backward Design

Apply Strategic Principles
Stage 1 – Desired Results

Established Goal(s):

- What relevant goals (e.g., Content Standards, Course or Program Objectives, Learning Outcomes etc.) will this design address?

Understanding(s):
Students will understand that...

- What are the “big ideas”?
- What specific understandings about them are desired?
- What misunderstandings are predictable?

Students will know...

- What key knowledge and skills will students acquire as a result of this unit?
- What should they eventually be able to do as a result of such knowledge and skill?

Students will be able to...

- What provocative questions will foster inquiry, understanding, and transfer of learning?

Stage 2 – Assessment Evidence

Performance Task(s):

- Through what authentic performance task(s) will students demonstrate the desired understandings?
- By what criteria will “performances of understanding” be judged?

Other Evidence:

- Through what other evidence (e.g. quizzes, tests, academic prompts, observations, homework, journals, etc.) will students demonstrate achievement of the desired results?
- How will students reflect upon and self-assess their learning?

Stage 3 – Learning Plan

Learning Activities:

- What learning experiences and instruction will enable students to achieve the desired results?
- How will the design equip learners to demonstrate their understanding?
Using Backward Design to Structure Observations

by James Reidl, member UbD Cadre

Pre-Observation Conference

Stage 1
- What do you want students to come to understand?
- What do you want students to know and be able to do?
- How will students know what they will be learning?

Stage 2
- What are some forms of evidence you will collect to determine if students have achieved the desired results?
- Are students clear about the criteria for success?

Stage 3
- In what ways will you help students learn this?

Observation

Observation focuses on student actions and products more than on the teacher’s actions.

Post-Observation Conference

- To what extent did your students learn what you intended?
- What evidence of learning did you collect? What does it tell you? Is other evidence needed?
- In what ways did you provide feedback?
- Of the strategies you used, which were most effective?
### Stage 1 – Desired Results

**Goal(s):**
- What needs do learning results/data reveal?
- What improvements are needed? What is our vision?
- What do we want to accomplish as a result of this initiative?

**Understanding(s):**
- What understandings and attitudes do teachers, administrators, parents, policy makers, etc. need for these goals to be met?

**Essential Question(s):**
- What essential questions about teaching, learning, results and change should guide our improvement actions?

**Knowledge & Skills:**
- What knowledge and skill will teachers, administrators, policy makers, parents, and students need for this vision to become a reality?

### Stage 2 – Assessment Evidence

**Direct Evidence:**
- What will count as evidence of reform success?
- What are observable indicators of short and long-term progress?

**Indirect Evidence:**
- What other data (e.g., achievement gaps; staff understandings, attitudes, and practices; organizational capacity, etc.) should be collected?

### Stage 3 – Action Plan

- What short- and long-term actions will we take to achieve our goals (in curriculum, assessment, instruction, professional development, policy, resource allocation, job appraisal, etc.)?
- What strategies will help us achieve the desired results?
- Who will be responsible? What resources will be needed?
## Stage 1 – Desired Results

**Goal(s):**

**Understanding(s):**

**Essential Question(s):**

**Knowledge & Skills:**

## Stage 2 – Assessment Evidence

**Direct Evidence:**

**Indirect Evidence:**

## Stage 3 – Action Plan

<table>
<thead>
<tr>
<th>Key Actions:</th>
<th>Person(s) Responsible:</th>
<th>Time Frame:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Backward Design Plan for an Elementary School Improvement Goal

Stage 1 – Desired Results

**Goal(s):**
- Reduce the amount of whole-group instruction and increase use of appropriate differentiated strategies.
- Increase the use of pre-assessments to diagnose students’ readiness levels and guide differentiation.
- Increase the achievement (annual growth) of all student sub-groups in reading and mathematics.

**Understandings (for teachers):**
- Learners differ in their readiness (background knowledge, skills and experiences), learner profile (culture, gender, and preferred style) and interests.
- Learning is enhanced when these differences are acknowledged and addressed.
- Diagnostic (pre-) assessments are essential to reveal differences in readiness, profiles, and interests to guide differentiation.
- Respectful tasks engage learners with content standards in ways that appropriately challenge them.

**Essential Questions (for staff exploration):**
- Why should we differentiate our instruction?
- What does effective differentiation look like in the classroom?
- How do we decide what differentiation is needed?
- How can we make differentiation feasible with large classes?
- Is differentiation compatible with a standards-based accountability system?

**Knowledge: Staff will know...**
- basic principles and practices of differentiation
- the ways in which students differ
- the content standards and benchmarks that all students are expected to learn

**Skills: Staff will be able to...**
- apply basic differentiation strategies – tiered lessons, flexible groupings, scaffolded assignments, and giving appropriate choices
- use diagnostic (pre-) assessments effectively
- manage a differentiated classroom

**Stage 2 – Assessment Evidence**

**Direct Evidence:**
- Classroom observations will find:
  - decreased use of whole-group instruction
  - increased use of pre-assessments and appropriate differentiated instruction
  - effective management of the class
  - increase in student engagement in learning

  Student assessment data will show:
  - Increased achievement by sub-groups in reading and mathematics.

**Indirect Evidence:**
- Lesson plans include plan for differentiation.
- Teachers can explain how their instruction is responsive to student learning needs based on assessment data.
- Staff surveys identifying needs for future professional development.

**Stage 3 – Action Plan**

- Purchase copies of Differentiated Instruction and Understanding by Design (ASCD, 2006) for all teaching staff, and encourage them to read the book during the summer.
- Use the pre-school professional days and our two in-service days for book discussion, exploration of essential questions, and staff workshops on differentiation strategies conducted by district specialists.
- Engage staff in developing a set of observable indicators of effective differentiated instruction in the classroom.
- Use the agreed-upon set of observable indicators for “walk through” classroom visits; provide feedback to staff.
- Encourage grade level teams in sharing lesson plans that incorporate differentiated strategies.
- Use one faculty meeting a month for exploring a particular DI strategy (determined by staff needs assessment).
- Use regularly scheduled grade-level meetings to examine assessment data (from district benchmark assessments and state test results) and make plans for improving sub-group student performance. (Note: May involve some regrouping of students across classrooms.)
### Backward Design Plan for a District Implementation Plan

#### Stage 1 – Desired Results

**Goal(s):**
- Ensure a more thorough understanding of what UbD is and how it can improve our daily work.
- Supervisors will be able to observe indicators of successful implementation and provide feedback to faculty on the application of UbD principles throughout the school year.
- Faculty will be able to effectively design, implement and review quality UbD units that are aligned to standards.

**Understanding(s):**
- Effective curriculum/units/daily lessons design evolves “backward” from clear goals and is aligned across all three stages.
- UbD is a way of thinking more carefully about curriculum/units/daily lessons design; it is neither a prescriptive program nor just a template for design.
- UbD design process is non-linear and ongoing.
- Teaching and assessing for understanding enhances learning of content standards.

**Essential Question(s):**
- Why are the best curricula/units/lessons designed “backwards”?
- What is good design? How does UbD support curriculum/unit/lesson design?
- Why teach for understanding?
- How will we know that students really understand?
- How will we know that as a district we are moving from an awareness stage to an application stage in the change process?

**Knowledge:** Staff will know...
- the 3 stages of “backward design”
- characteristics of “big ideas” and “essential questions”
- the six facets of understanding and GRASPS
- the WHERE TO elements of instructional planning
- design standards of UbD

**Skills:** Staff will be able to...
- develop understandings, essential questions and assessment evidence.
- design units using the “backward design” template that meet UbD Design Standards.
- review other designs against the Design Standards.

#### Stage 2 – Assessment Evidence

**Direct Evidence:**
- Develop draft designs using UbD template and tools.
- All staff participate in a school-based unit peer review process for feedback and making necessary revisions.
- Pilot the UbD units, reflect on results, and plan for changes.
- Participate in regional peer review processes for final approval prior to District curriculum adoption.
- Principals integrate UbD standards into supervision and evaluation process, and observe implementation of UbD principles applied in daily lessons.

**Indirect Evidence:**
- Pre- and post-workshop surveys.
- Observations of participants’ understandings, questions, misconceptions, and frustrations.
- Quality of responses on exercises and worksheets.
- Participants’ self-assessments and reflections on their understandings and design.
- Written and oral feedback on workshops and UbD implementation
- “Needs” statements for future professional development.

#### Stage 3 – Action Plan

- Work as school-based teams to establish clear goals aligned to state standards.
- Regional curriculum committees will review and revise the regional curriculum guides to create common goals and core rubrics for assessment on a continuous basis as part of District’s Curriculum Development plan.
- Utilize portions of faculty meetings to facilitate deeper understanding of unit design and share works in progress.
- Provide guided design work time and workshops as needed.
- Build in opportunities for teams to work on units (e.g., through release time, summer work, after-school work).
- Provide opportunities for interested faculty to advance their learning through regional and/or school-based study groups, and local, regional, state, and national conferences.
- Provide ongoing peer review training opportunities in order to build expertise first regionally and then locally
- Publish approved units and excellent UbD models on ubdchange.org and school-based intranets.
- Administrators will monitor implementation, providing faculty with ongoing input using observable indicators.
Backward Design Plan for a Workshop on Understanding by Design

Stage 1 – Desired Results

Understanding(s):

- Effective curriculum design evolves “backward” from clear goals and is aligned across all 3 stages.
- UbD is a way of thinking more carefully about curriculum design; it is not a prescriptive program.
- Using design standards improves quality.
- The UbD design process is non-linear and iterative.
- Teaching and assessing for understanding enhances learning of content standards.

Staff will know...

- the 3 stages of “backward design”
- characteristics of “big ideas” & “essential questions”
- the 6 facets of understanding and GRASPS
- the WHERE TO elements of instructional planning
- design standards for UbD

Essential Question(s):

- Why are the best curriculum designs “backwards”?
- What is good design? How does UbD support effective curriculum design?
- How does “continuous improvement” apply to curriculum design?
- Why teach for understanding?
- How will we know that students really understand?
- What is the difference between understanding and knowing?

Stage 2 – Assessment Evidence

Performance Task(s):

- Develop a draft design using the UbD template and tools. (Design meets most of the UbD design standards.)
- Participate in a peer review process using design standards and provide feedback to designers.

Other Evidence:

- pre- and post-workshop surveys
- observations of participants’ understandings/questions/misconceptions/frustrations
- quality of responses on exercises and worksheets
- participant self-assessments and reflections on their understandings and design
- written and oral feedback to presenter

Stage 3 – Learning Plan

Learning Activities: (selected)

- overview of session, performance goal, meet in role-alike groups
- exercise on Good Design
- study and discuss “before” and “after” design examples
- guided design work on each stage
- watch and discuss relevant video clips
- “gallery walk” to review participants’ designs
- lecture/discussion on key design elements and issues
- peer review against design standards
Essential Questions to Promote Staff Inquiry and Reflection
(examples)

MISSION and BELIEFS
• To what extent does our (team, school, district, community) share a common Mission?
• What educational beliefs about teaching and learning do we hold?
• What assumptions about learning guide our instructional and assessment practices?
• To what extent do our policies, priorities, and actions reflect these beliefs?
• To what extent do our policies, priorities, and actions honor our Mission?

STANDARDS
• How would people know that we are a “standards-based” school/district?
• What are observable indicators at the classroom? ... school? ...district?
• To what extent are we “walking the talk” and using standards to guide our work (e.g.,
curriculum, assessment, instruction, professional development, staff appraisal)?

CURRICULUM
• Why should curriculum be planned “backward”?
• To what extent is our curriculum coherent and aligned?
• Does our curriculum highlight enduring knowledge and authentic performance?
• What content should we “cover” and what needs to be “uncovered?”
• To what extent do textbooks function as the syllabus (rather than a resource)?

ASSESSMENT
• How are we doing? What evidence is needed to answer this question?
• How will we know that students really understand the “big” ideas?
• Are we assessing everything we value (or only those things that are most easily tested
and graded)?
• Is anything important “falling through the cracks” because we are not assessing it?
• How might our assessments promote learning, not simply measure it?

INSTRUCTION
• To what extent is our instruction engaging and effective?
• To what extent does our instruction reflect research and best practices?
• To what extent are we engaging students in “doing” the subject?
• Are we effectively teaching ALL students?
Essential Questions to Promote Staff Inquiry and Reflection
(continued)

PROFESSIONAL DEVELOPMENT
• To what extent do our professional development practices reflect the research on adult learning?
• How does our staff view professional development?
• To what extent are our professional development practices “results” oriented?
• Is our professional development appropriately differentiated?

CHANGE PROCESS
• What do we believe about educational change? To what extent are these shared beliefs?
• To what extent are various initiatives seen as connected and coherent (as opposed to being seen as separate things or “add ons”)?
• How might we “work smarter” and more effectively?

POLICY, STRUCTURES, CULTURE
• To what extent do our policies, structures, and culture reflect our beliefs about learning?
• How might we restructure to enhance learning?
• What is the best use of our time when teachers are not with students?
• What messages do our policies send?
• Is our staff appraisal process working?
• To what extent do we have a culture of continuous improvement?
• What existing factors support this reform? What factors resist change?
• How do our leaders receive the honest feedback they need to improve?
• To what extent does our grading and reporting system communicate clearly and honestly?
• Are resources (e.g., time, money, facilities, technology) being used optimally to advance learning?

OTHER
• Would you want your child to attend our school?
• other: _____________________________________________________________
Observable Indicators of Success

What if the reform vision was actualized? What would we routinely expect to see in classrooms, schools, and throughout the district? Use the spaces below to identify specific observable indicators of reform success.

Classroom:

________________________________________
________________________________________
________________________________________
________________________________________
________________________________________

School:

________________________________________
________________________________________
________________________________________
________________________________________
________________________________________

District:

________________________________________
________________________________________
________________________________________
________________________________________
________________________________________
Teaching and Assessing for Understanding – Observable Classroom Indicators

To what extent are...

1. Instruction and assessment focused on “big ideas” and essential questions based on established standards/outcomes? 4 3 2 1

2. Essential questions posted and revisited throughout a unit? 4 3 2 1

3. Pre-assessments used to check students’ prior knowledge and potential misconceptions regarding new topics of study? 4 3 2 1

4. Opening ”hooks” used to engage students in exploring the big ideas and essential questions? 4 3 2 1

5. Students’ understanding of the “big ideas” and core processes assessed through authentic tasks involving one or more of the six facets? 4 3 2 1

6. Evaluations of student products/performances based upon known criteria/rubrics, performance standards, and models (exemplars)? 4 3 2 1

7. Appropriate instructional strategies used to help learners’ acquire knowledge and skills, make meaning of the big ideas, and transfer their learning? 4 3 2 1

8. Students given regular opportunities to rethink, revise and reflect on their work based on feedback from on-going (formative) assessments? 4 3 2 1

9. The students expected to self-asses/ reflect on their work/learning and set goals for improvement? 4 3 2 1

10. Other: ____________________________ 4 3 2 1
Mission-Related Indicators – Middle School

**Self Directed Learner**

As I continue to become a responsible, self-directed learner, I:

- arrive prepared for class.
- plan and budget time to meet deadlines.
- follow through on commitments.
- attend to and follow directions.
- manage my behavior so that I remain focused.
- organize time and materials.
- persevere in challenging situations.
- take ownership of work and actions.
- strive to do my best work in all situations.
- strive for accuracy.
- am able to undertake independent study.

As I continue to become a resourceful, self-directed learner, I:

- ask a variety of questions in order to clarify my understanding.
- know when and how to seek help and assistance.
- find and use information from a variety of sources.
- evaluate information for reliability, accuracy and credibility.
- demonstrate a willingness to take risks in order to learn.
- use reasoning strategies, knowledge and common sense to solve problems.
- apply prior knowledge to new situations.

As I continue to become a reflective, self-directed learner, I:

- am thoughtful, open-minded, and curious.
- assess my work in order to identify areas of strength and weakness.
- assess the strengths and weaknesses of how I learn in order to make appropriate adjustments.
- generate and employ strategies to improve weaknesses.
- respond to new information by reflecting on experience and reconsidering my opinion and sources of information.
- listen to and respect the contributions of others.

**Responsible and Involved Student/Citizen**

As I continue to strive toward being a responsible student/citizen, I:

- demonstrate skill in decision-making which reflects that my choice is informed and based on ethical behavior rather than peer-pressure.
- understand and accept responsibility for my actions.
- resolve conflicts peacefully without compromising personal values.
- respect the rights and feelings of myself and others.
- respect school property as well as the environment.
- make healthy choices.
Mission-Related Indicators – Middle School (continued)

As I continue to strive toward being an involved student/citizen, I:
• participate in a variety of school activities beyond the school day.
• productively contribute to the community.
• demonstrate dependability, productivity and initiative.

Creative and Practical Problem Solver
As I continue to strengthen my ability to become a creative and practical problem solver, I:
• carefully observe situations to identify a problem.
• define problems clearly and accurately.
• brainstorm solution strategies using reasoning, prior knowledge, common sense, creativity.
• identify and gather relevant information to support solution strategies.
• apply the steps necessary to carry out the solution strategy.
• identify patterns, trends, and relationships that apply to the solution(s) of the problem.
• evaluate the effectiveness of the process(es) and solution(s).
• extend and/or transfer the learning to new situations.

Effective Team Member
As I continue to strengthen my ability to collaborate with others, I:
• understand and commit to the goal of the group
• share ideas with others
• accept ideas/opinions from others
• actively participate in brainstorming sessions
• demonstrate respect for myself and others
• positively interact with group members
• demonstrate flexibility in group decisions (compromise)

As I continue to strengthen my ability to cooperate with others, I:
• follow directions
• accept responsibility for my role in the task at hand
• demonstrate dependability and reliability
• contribute to accomplishing the goal in a timely manner

As I continue to strengthen my ability to develop interpersonal skills, I:
• assist in resolving conflicts
• am knowledgeable about individual roles of group members
• actively listen to others
• provide constructive feedback to others
• utilize feedback from others

Source: West Windsor-Plainsboro Schools, New Jersey
Understanding by Design Elements: Assessing Your School

Use the continuum to analyze the classroom practices in your school according to the following UbD reform elements.

**Desired Results**

1. Learning activities clearly address established content standards.
2. The textbook is one resource among many used in teaching to the standards.
3. Instruction and assessment are focused on exploring “big ideas” and essential questions.
4. Student understanding of the “big ideas” in content standards is assessed through complex performance tasks using the six facets.
5. Teacher evaluations of student products/performances are based upon known criteria, performance standards, and models.
6. The students regularly self assess their work based on the established criteria.
7. Teachers regularly pose open-ended questions with no obvious right answer. They are designed to direct and deepen inquiry and understanding.
8. Students are given regular opportunities to rethink and revise their work based on feedback from on-going (formative) assessments.

**Needed Changes**

1. Learning activities do not typically address established content standards.
2. Textbooks serve as the primary teaching resource. (The textbook functions as the syllabus.)
3. Instruction consists primarily of content coverage, doing activities, and/or preparation for high-stakes, standardized tests.
4. Assessment consists primarily of quizzes and tests of factual knowledge and discrete skills.
5. The students do not know (i.e., cannot explain) how their work will be evaluated. They are typically not shown models of exemplary work.
6. Students do not regularly self assess their work according to established criteria.
7. Most teacher questions are convergent, leading questions, pointing toward the knowledge students are expected to learn.
8. Formative assessments are not routinely used. Students are rarely given opportunities to rethink and revise their work based on specific feedback.
## Using Backward Design for Action Planning

<table>
<thead>
<tr>
<th>Stage 1 – Desired Results</th>
<th>Stage 2 – Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identify observable indicators of success for ____________</td>
<td>Identify needed changes.</td>
</tr>
</tbody>
</table>

- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
- [ ] ____________
## Considering Multiple Sources of Data

<table>
<thead>
<tr>
<th></th>
<th>Quantitative</th>
<th>Qualitative</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>External</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>✑ state achievement tests</td>
<td>○ surveys of constituent groups (e.g., parents, business leaders, community members)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>○ school accreditations</td>
</tr>
<tr>
<td></td>
<td>✑ national standardized tests</td>
<td>○ structured observations by visitors (e.g., critical friend, university partner)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Internal</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>✑ local achievement tests/</td>
<td>○ surveys of students</td>
</tr>
<tr>
<td></td>
<td>(e.g., common exams)</td>
<td>○ surveys of teachers</td>
</tr>
<tr>
<td></td>
<td>✑ core performance tasks</td>
<td>○ surveys of administrators</td>
</tr>
<tr>
<td></td>
<td>✑ student work</td>
<td>○ surveys of community</td>
</tr>
<tr>
<td></td>
<td>✑ grade distributions</td>
<td>○ structured observations (e.g., classroom visits)</td>
</tr>
<tr>
<td></td>
<td>✑ graduation/dropout rates</td>
<td>○ other: ________________</td>
</tr>
<tr>
<td></td>
<td>✑ other: ________________</td>
<td></td>
</tr>
</tbody>
</table>

### Data Sources
- External
  - State achievement tests
  - National standardized tests
  - Surveys of constituent groups (e.g., parents, business leaders, community members)
  - School accreditations
  - Structured observations by visitors (e.g., critical friend, university partner)

- Internal
  - Local achievement tests (e.g., common exams)
  - Core performance tasks
  - Student work
  - Grade distributions
  - Graduation/dropout rates
  - Surveys of students
  - Surveys of teachers
  - Surveys of administrators
  - Surveys of community
  - Structured observations (e.g., classroom visits)
  - Other: ________________

### Other
- Other: ________________
Analyzing External Test Data

- criterion-referenced: 

- norm-referenced: 

- college admission: 

  - What achievement targets are being measured?
  - Who are the students tested?
  - What do the numbers in the data represent?
  - What strengths and weaknesses are revealed by the data?
  - How are different population groups performing?
  - How do these results relate to established performance standards?
  - How do our results compare to those of similar (“best in class”) schools?
  - How do results on different tests relate?
  - Have results changed over time? In what ways?

Summary statement:
Analyzing External Test Data (examples)

✓ criterion-referenced: State Reading Assessment (gr. 3)

✓ norm-referenced: Iowa Tests of Basic Skills - Reading (gr. 2)

Summary statement: The grade 2 reading median percentile score for the school on the Iowa Tests of Basic Skills has averaged between 65 and 70 for the past three years. In this period, students did well in word identification but were weak in inferring meaning and in identifying sequential relationships. On average, however, only 35% of the grade 3 students scored at the “proficient” level on the state reading assessment in the same three-year period. Lowest performance on the state test was in distinguishing cause from effect and in explaining the extent to which predictions were confirmed by the text and why. There was a small performance gap on both measures between African American and white students. Girls outperformed boys every year on both the criterion-referenced and norm-referenced assessments.

✓ norm-referenced: Terra Nova - Mathematics (gr. 4)

Summary statement: For the past four years, between 75% and 80% of the school’s grade 4 students tested “on or above grade level” in mathematics on Terra Nova. On average, however, only 50% of the students who entered the school within the last 12 months tested at least “on grade level.” Areas of most concern over the years for all students have been in geometry and spatial sense; data analysis, statistics, and probability; and problem solving and mathematical reasoning. Students new to the school also typically had the most difficulty with computation and estimation.
Example – Using Department Meeting Time
to Examine Student Performance on a State Test

Minutes of the Meeting

The meeting began at 2:15. Margaret explained what she hopes departments will accomplish by meeting on a 7-12 basis. We have to make sure all students have similar learning experiences as they go through the grades and through the state exams. Although our results on the state exams at the end of grades 8, 10, and 11 have been good, they could be even better, particularly in terms of having even more students perform at the mastery level.

The three state exams (Global History and Geography, Economics, Government and US History) for June 2001 were distributed, along with an item analysis for the multiple-choice questions.

The data on the Grade 8 exam had been broken down so we could see how many students selected each of the four choices for the 45 MC questions. Margaret asked us to look at the questions that were most frequently missed, focusing not just on the content of the question, but also on the most popular wrong answer for each of those questions. She feels we can get a better idea of where our students have gaps in their understanding if we examine their incorrect answers.

We looked at Question #23 on the Grade 8 exam, dealing with the free-enterprise system. Why did nearly as many students pick the wrong answer of stockholders being guaranteed a profit as picked the right answer of businesses competing for consumer dollars? Was it the wording of the question, or are they lacking some understanding of the free-enterprise system?

The item analyses for the two high school exams were less revealing, since they only provided the percentages of students who answered each question correctly, without the number of students selecting the four choices for each of the 50 questions.

We spent some time examining Question #25 on the Global exam, dealing with the main cause of the mass starvation in Ireland during the 19th century. The correct answer was the failure of the potato crop. We suspect many students blamed it on the war between Protestants and Catholics in northern Ireland, since they had studied that topic not long before they took the exam. They probably learn more about the potato famine in 11th grade, but is there a reason why they didn’t know it prior to that? The state expects social studies teachers to be teaching that topic, and our library media centers should soon receive a State Ed. guide to teaching about the potato famine.

In terms of what to do with this in future meetings, we agreed that everyone would focus on one of the three exams, preferably not an exam at that teacher’s grade level. Margaret asked us to look not so much at the specific content or the wording of the problem questions, but rather to look at the concepts or larger understandings that the students might be missing. Also, are there particular types of questions that our students tend to miss, e.g. cartoons, speaker questions, tables and graphs? Each person selected one exam to study.

We agreed to hold future meetings on the third Tuesday of the month, so the next meeting will be on Tuesday, October 16 in my room (C120) at the high school. When we meet on the 16th, we’ll break down into three groups, according to the three exams, so people can discuss what they noticed on the exam they reviewed.

Meeting adjourned at 3:00 p.m.
Questions To Ask When Examining Student Work

Use the following questions to guide the examination of student work.

**Describe**
- What knowledge and skills are assessed?
- What kinds of thinking are required (e.g., recall, interpretation, evaluation)?
- Are these the results I (we) expected? Why or why not?
- In what areas did the student(s) perform best?
- What weaknesses are evident? What misconceptions are revealed?
- Are there any surprises? What anomalies exist?
- Is there evidence of improvement or decline? If so, what caused the changes?

**Evaluate**
- By what criteria am I (are we) evaluating student work?
- Are these the most important criteria?
- How good is “good enough” (i.e., the performance standard)?

**Interpret**
- What does this work reveal about student learning and performance?
- What patterns are evident?
- What questions does this work raise?
- Is this work consistent with other achievement data?
- Are there different possible explanations for these results?

**Identify Improvement Actions**
- What teacher action(s) are needed to improve learning and performance?
- What student action(s) are needed to improve learning and performance?
- What systemic action(s) at the school/district level are needed to improve learning and performance (e.g., changes in curriculum, schedule, grouping)?
- Other: ________________________________?
Data-Driven Improvement Planning

Based on an analysis of achievement data and student work:

- What patterns of weakness are noted?
- What specific areas are most in need of improvement?

- problem solving and mathematical reasoning are generally weak
- students do not effectively explain their reasoning and their use of strategies
- appropriate mathematical language is not always used

What specific improvement actions will we take?

- Increase our use of “non routine” problems that require mathematical reasoning.
- Explicitly teach (and regularly review) specific problem solving strategies.
- Develop a poster of problem solving strategies and post in each math classroom.
- Increase use of “think alouds” (by teacher & students) to model mathematical reasoning.
- Develop a “word wall” of key mathematical terms and use the terms regularly.
- Revise our problem solving rubric to emphasize explanation & use of mathematical language.
Data-Driven Improvement Planning

Based on an analysis of achievement data and student work:

- What *patterns* of weakness are noted?
- What *specific* areas are most in need of improvement?

What *specific* improvement actions will we take?
Professional and Collaboration Time (PACT)

Charge:

We will use PACT to collaborate within various “Learning Communities” to grow professionally, and to collaborate together to enhance our planning, teaching and assessment with a focus on student learning. PACT is not intended for departmental or team “housekeeping” or for individual teacher planning.

Goals:

To improve curriculum quality and alignment
To analyze “results” and student work
To enhance instructional and assessment practices
To increase professional conversations between ASD faculty members
To better implement school improvement initiatives through collaboration

Schedule:

• Tuesday 1:10 – 3:10 (1:10 – 2:10 = horizontal teams, 2:10 – 3:10 = vertical teams if needed)

Suggestions of collaborative tasks:

– looking at student work
– analyzing data to improve student learning (e.g., NWEA scores, AP results, etc)
– evaluating and refining the quality of assessment tasks & rubrics
– planning among teachers who teach common courses
– coordinating among grade level teams (e.g., vertical alignment of curriculum)
– developing common assessments/rubrics (including moderation of assessments)
– planning for integration of units
– reviewing UbD Units and Atlas Rubicon Curriculum Maps
– discussing professional readings
– planning for implementation of new school/team programs
– participating in professional development
Options for “Making Time”

Staff need time to analyze assessment results (external and internal), examine student work, make improvement plans and conduct action research into persistent achievement problems. Consider the following ways of making time for these important “results-oriented” actions. Each has been implemented successfully by schools in North America.

1. Half the faculty covers for the whole faculty once per month on pre-assigned days; classes double up and/or teachers of “specials” plan large-group activities

2. Teachers spend one hour per month on “results-oriented” actions, taken as needed from current faculty/department/team meetings and in-service days

3. Schools introduce late start/early release one day per month

4. Each grade-level/department team is allocated two hours per week, with coverage provided by other teams, administrators, student teachers, or substitutes

5. Five days of summer work become part of the contract*

6. Two hours of non-contact, staff time are added to each Monday, then traded for three days added to vacation

7. One permanent sub per grade level is hired for the needed period of time

8. The school year is reorganized—half-day twice per month should be scheduled with no students; add 5 minutes to other instructional days for the minutes lost

9. Teachers meet for an extended lunch and resource period or assembly schedule.

10. Providers of special group learning (Project Adventure, etc.) give assemblies to release teachers for three half-days per year.

11. Roving subs, hired for a day, release grade level/department teams

* Though it is imperative to free up time over the course of a year to permit “results-oriented” work and action research to occur, there is singular value in bringing together design teams in the summer for intensive training and curriculum development work.
Assessing Staff: Ready? Willing? Able?

*Directions:* Place estimates of percentage of staff who fall into the 9 categories below. Then, consider the different actions/strategies that may be needed for each group.

<table>
<thead>
<tr>
<th>Do they get it?</th>
<th>Are they willing?</th>
<th>Are they able?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Yet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not Likely</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

What patterns are evident?  What are the implications?

Possible Actions:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
### Assessing Conditions for School Improvement: Force Field Analysis

#### (examples)

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Assessment</th>
<th>Instruction</th>
<th>Professional Development</th>
<th>Resources</th>
<th>Policy</th>
<th>Other:</th>
</tr>
</thead>
<tbody>
<tr>
<td>+</td>
<td>curriculum mapping has been completed in all content areas</td>
<td>widespread use of the writing process w/ peer editing and revision</td>
<td>several teachers involved in a pilot “action research” project through RESA</td>
<td>several sources of available grants to support reform activities (e.g., Goals 2000)</td>
<td>State requires districts to develop “multiple measures” to assess content standards at the local level</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>adoption of new “problem-based” mathematics series emphasizing conceptual understanding</td>
<td>the use of portfolios in elementary language arts and secondary visual arts</td>
<td>the use of the five E’s as an instructional framework for science teaching</td>
<td>installation of Internet-ready computers in every school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>+</td>
<td>Board of Ed. and community fixate on state test scores (Other evidence isn’t valued.)</td>
<td>many cases of “activity-based” teaching at the elementary level</td>
<td>history of “one shot” events on inservice days</td>
<td>no budget allocation for summer design work</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>no “quality control” process in place for local curriculum</td>
<td>“scantron-type” testing is predominant in our high school</td>
<td>a “coverage” orientation at the secondary level</td>
<td>teacher appraisal process is not “results” focused</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>no experience with peer review</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- No incentives for individuals and teams to experiment, share ideas, and critique work collaboratively
- No demands that designs be public
Assessing Conditions for School Improvement: Force Field Analysis

Use the following matrix to assess those forces that support planned reforms and those that resist.

<table>
<thead>
<tr>
<th>Curriculum</th>
<th>Assessment</th>
<th>Instruction</th>
<th>Professional Development</th>
<th>Resources</th>
<th>Policy</th>
<th>Other:</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ Assist</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Resist</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assessment

Instruction

Professional Development

Resources

Policy

Other:
## Backward Design for School Improvement Planning
### Stage 1 – Desired Results

Goal for the Reform Initiative or Needed Improvement

<table>
<thead>
<tr>
<th>Understandings:</th>
<th>Essential Questions:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Knowledge and Skills:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>
### Backward Design for School Improvement Planning

#### Stage 2 – Needed Evidence

<table>
<thead>
<tr>
<th>Direct Evidence:</th>
<th>Plan to collect and analyze it:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indirect Evidence:</th>
<th>Plan to collect and analyze it:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Backward Design for School Improvement Planning – Stage 3

<table>
<thead>
<tr>
<th>Key Actions</th>
<th>Person(s) Responsible</th>
<th>Groups/#s Involved</th>
<th>Date(s) – Time Frame</th>
<th>Budget – Amount/Source(s)</th>
<th>Evaluation Plan</th>
<th>Evaluation Plan</th>
</tr>
</thead>
</table>

© 2011 Jay McTighe and Grant Wiggins
### Stage 3 – Action Plan

<table>
<thead>
<tr>
<th>Key Actions</th>
<th>Person(s) Responsible</th>
<th>Groups/ #s Involved</th>
<th>Date(s) – Time Frame</th>
<th>Budget – Amount/Source(s)</th>
<th>Evaluation Plan</th>
</tr>
</thead>
</table>

#### Year 2

#### Years 3 – 5