A Guide to the
325T Grant ~ in Progress

Reflective Analysis of Student Work Through a Formative Assessment Micro-Action Research Cycle

Mary Ford, Ed.D.
Robert Greenleaf, Ed.D.
Melissa Donovan M.Ed.
325 T Grant Overarching purpose #2:

To make K-12 student achievement data the primary evidence of successful course completion across the teacher preparation program.

Sequence

GSC Coursework Leads to Teacher Capacities Impact K-12 Student Achievement
Standardized data was not purposeful or appropriate as a tool to assess clear or timely links to performance outcomes thus…

**Design**: frequent intervals of formative data ~ as a means of generating timely:

1. links to **current** student performance
2. reflective analysis of student **learning** needs
3. feedback regarding the impact of selected teaching strategies upon K-12 a student learning need target.
SUPPORT FOR OUR APPROACH AND COMPONENT CRITERIA IN THE LITERATURE:

JAMES POPHAM
(Educational Leadership, April, 2009
Transformative Assessment, 2008)

Data Driven:

“Formative assessment ... is an ongoing process in which teachers use test-elicited evidence to adjust their instruction or ... learning tactics.”

Curriculum Driven:

...teachers need to identify the truly pivotal building blocks that students must learn on their way to mastering a more distant curricular outcome.”
SUPPORT FOR OUR APPROACH AND COMPONENT CRITERIA IN THE LITERATURE:

Feedback Driven:

  Reeves (2003) -- “one characteristic of schools with great academic gains is feedback to students that is both accurate and in real-time.”

  Hattie (1992) -- “The most powerful single modification that enhances achievement is feedback.”

Focus Driven:

  Schmoker (1996, 2003, 2011) [implor​es that we] ... “establish focus, collaborate effectively (on student work), and measure a limited number of targeted student achievement goals.”
### Action Research Project ~ 2009

#### 11 Effective Strategies for Achievement

*a la* Marzano & Haystead

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>PERCENTILE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative Tracking Student Progress &amp; Scoring Scales</td>
<td>34%</td>
</tr>
<tr>
<td>Setting Objectives and Providing Feedback</td>
<td>25%</td>
</tr>
<tr>
<td>Identifying Similarities and Differences</td>
<td>20%</td>
</tr>
<tr>
<td>Building Vocabulary</td>
<td>20%</td>
</tr>
<tr>
<td>Interactive Games</td>
<td>20%</td>
</tr>
<tr>
<td>Summarizing and Note Taking</td>
<td>19%</td>
</tr>
<tr>
<td>Nonlinguistic Representation</td>
<td>17%</td>
</tr>
<tr>
<td>Cooperative Learning –Student Discussion--Chunking</td>
<td>17%</td>
</tr>
<tr>
<td>Note Taking</td>
<td>17%</td>
</tr>
<tr>
<td>Homework and Practice</td>
<td>15%</td>
</tr>
<tr>
<td>Reinforcing Effort and Providing Recognition</td>
<td>14%</td>
</tr>
</tbody>
</table>

*CLASSROOM INSTRUCTION THAT WORKS* (2001) - *revisited*
Our design was to have TC’s:

1. identify **specific** learning targets
   (not overarching goals)

2. track K-12 student progress across 4-5 feedback intervals
   (on selected strategies that directly **LINK** with the clear, specific learning targets they identified.)

**INITIAL Data Set:** Spring 2010:
Bi-Weekly Formative Feedback from 15 Teacher Candidates
Examples of Formative Interval Submissions

Clear link and or specific reference to student performance data missing:

1. Our approach [to listening skills] will be based on communication/collaboration with instructor. Instructor will return to reading to the class as a whole. Preferential seating will be given to the student. 
   (no data provided; no link between a strategy & the learning target)

2. We have gathered the Antecedents to his behavior. He most reacts to having work presented to him. He is to be removed from class and have the work put away. The consequence is being able to go to the conference room and have attention from different adults.
   (data not clear; strategy not linked to a learning target)

3. I speak with the classroom teacher and his para-professional each day to monitor his behavior.
   (general: no reflective analysis based on current evidence)
**Initial Data Set:** Spring 2010: Categorized Bi-Weekly Formative Feedback by 15 Teacher Candidates on K-12 Student Performance

- **General comments only:** 64 entries
- **No LINK between student work & selected strategy:** 67 entries
- **Some level of detail provided:** 9 entries
- **Clear LINK to specific impact on student performance:** 14 entries (9% of total entries)

**Findings:**

- Very few were able to integrate formative feedback as a real-time tool to drive instruction.
- Most struggled with “general” vs. specific comments on student work.
- Most did not address K-12 student performance data by linking it to a strategy.
Barriers to Implementation
(of a Student Achievement Outcomes Based Process)

1. Teacher Candidate understanding of:
   * A shift of emphasis from TEACHING to LEARNING (Strategy) vs. (performance)

2. Vocabulary and definition of terms: PLC; Formative Assessment; Reflective Analysis; Student Evidence

3. Faculty understanding of:
   - Implementing formative assessment
   - Reflective analysis of student work as the vehicle for discussion
   - Clearly linking student evidence / performance data DIRECTLY to a learning strategy

4. Flexibility of formative intervals:
   - Shift from bi-weekly for all to a choice of twice-weekly; weekly or bi-weekly.
Lessons Learned prompted a **Re-articulation** of Expectations for Fall 2010:

**Vehicle:** a template for gathering interval data to illustrate the criteria required for linking teacher candidate practices with K-12 Student Achievement Data
**Criteria 1: Focused Learning Target & Formative Evidence Data**

A. Write the overarching (IEP) goal you are addressing.
B. Identify a learning target within the scope of the goal
C. Articulate the:
   - evidence gathered
   - any issues, patterns, concerns, the data suggests
   - any other items of note.

**Criteria 2: Reflective Question**

The data prompted what questions about the student’s learning needs?

**Criteria 3: Reflective Learning Communities Response**

What sources did you engage and what feedback was provided?

**Criteria 4: Strategy: Next Step?**

What strategy will you use, that is **DIRECTLY LINKED to the formative data collected**?

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<table>
<thead>
<tr>
<th>A. Overarching IEP goal</th>
<th>Rating:</th>
<th>_</th>
<th>_</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. Learning Target:</td>
<td>Rating:</td>
<td>_</td>
<td>_</td>
</tr>
<tr>
<td>C. Evidence gathered / new data:</td>
<td>Rating:</td>
<td>_</td>
<td>_</td>
</tr>
</tbody>
</table>

Process Elements Lead to…

Strategy Directly & Clearly Linked?
Examples of Formative Interval Submissions with Template

Clear link and or specific reference to student performance data:

1. **Language arts:** Words incorrect and spelling errors showed patterns for blends, /k/, all vowel teams, silent e, diphthongs, and many sight words were missed.
   
   **[Linked strategy]:** We will first focus is on long ‘a’ words, having the student practice daily by grouping with other words that have same spelling pattern, then use a Look, Cover, Write, Check, sequence, writing sentences with word.

1. **Math:** Student is not paying attention to the sign in front of the constant always adding the constant when moving from one side of the equation to the other.
   
   **[Linked strategy]:** We will use a color coding approach, having the student color minus signs red and plus signs blue before calculating the problems.
Second Data Set ~ Fall 2010: (14 Teacher Candidates)

Aggregate (All four criteria) Performance Across Four Bi-weekly Intervals:

Percent Achieving *All Four Criteria*
(Articulate relevant data; reflective analysis of data; PLC; Linked Strategy)

<table>
<thead>
<tr>
<th>Interval</th>
<th>Percent</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>50.5</td>
</tr>
<tr>
<td>2</td>
<td>57.0</td>
</tr>
<tr>
<td>3</td>
<td>57.3</td>
</tr>
<tr>
<td>4</td>
<td>59.5</td>
</tr>
</tbody>
</table>

Intervals (twice per week; weekly; or bi-weekly) of formative assessment sequence
[Spring 2010 = Initial]

**Second Data Set: Fall 2010 Intervals 1 & 4: Bi-Weekly Formative Feedback by 14 Granite State College Teacher Candidates on each of four criteria on K-12 Student Performance**

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Interval 1</th>
<th>Interval 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Target</td>
<td>50</td>
<td>57</td>
</tr>
<tr>
<td>Reflective Question</td>
<td>52</td>
<td>57</td>
</tr>
<tr>
<td>PLC, Mentor, Expert</td>
<td>52</td>
<td>57</td>
</tr>
<tr>
<td>Direct Link</td>
<td>48</td>
<td>67</td>
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</table>

*Our Primary Focus*
Second Data Set: Fall 2010: Criteria #4 Only: 
*Link a Strategy Directly* to the Formative Feedback Obtained

**LINK STRATEGY TO FORMATIVE DATA CRITERIA: Our Primary Focus**

<table>
<thead>
<tr>
<th>Interval</th>
<th>Percent Meeting Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interval 1</td>
<td>48%</td>
</tr>
<tr>
<td>Interval 2</td>
<td>56%</td>
</tr>
<tr>
<td>Interval 3</td>
<td>50%</td>
</tr>
<tr>
<td>Interval 4</td>
<td>67%</td>
</tr>
</tbody>
</table>

1st Data Set: Spring 2010

9% (14 Entries)

2nd Data Set: Fall 2010
Final Interval of Consecutive Semesters:
Criteria #4: Direct Link Between Formative Assessment Data, Instructional Approach and Student Performance.

We will track future teacher candidate performance on criteria 4 (Links) across semester courses to assess performance. The intent is for this to become “second nature” and part of ongoing practice for all graduates.
Lessons Learned To Date:

1. **Defining Terms clearly, with examples:** (concepts, process, criteria, etc.) is imperative for inter-rater reliability and continuity of practice.

2. **Implementation is not guaranteed:** Following up on terms, process & concepts is paramount to performance outcomes.

3. **Immediate feedback** to teacher candidates, faculty and mentors on terms, implementation and criteria for performance is imperative if progress is to take place and be sustained.
Resource citations for the project and this presentation

BLACK & WILIAM. Formative Assessment. “Inside the Black Box,”… 1998

DONEGAN, ET. AL. “Coaching Reluctant Learners,” [formative assessment, unit design, student choice], available at www.greenleaflearning.com 2007


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So far... to date. Stay tuned!

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Second Data Set: Fall 2010: Progressive Performance on All Four Formative Assessment Criteria over Four Intervals
A *Re-articulation* of Expectations for Fall 2010:

**Purpose:**
To embed a process cycle that links ongoing student work (evidence) with the selection of approaches for the learner as determined through the reflective analysis (self and colleagues) of student work.

**Vehicle:** Cycle of reflective analysis template with 4 criteria stipulated:
- **Criteria 1:** Articulation of recent evidence / student work as a sub-component of an overarching IEP goal
- **Criteria 2:** Teacher reflective analysis of the student work evidence
- **Criteria 3:** PLC-Mentor-Expert analysis of the student work evidence
- **Criteria 4:** Linking a strategy /approach to the perceived student learning need.

**Process:**
Collect evidence across 4 intervals, adjusting instructional emphasis based on reflective analysis of student performance at each interval.