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## Micro-Feedback Data Loops

### Quotes @ Data

**Assessments Vary in Purpose**— “...assessments designed for ranking are generally not good instruments for helping teachers improve their instruction or modify their approach to individual students.” (reasons follow)

- Taken late in school year
- Results not available for 2-3 months
- Feedback lacks detail needed to target specific improvements.

Marzano

**Multiple Sources of Data**— “Which data [besides the state’s standardized test results] should we be analyzing to help our school improve?” “You can answer almost any question about the effectiveness of a school by gathering, intersecting and analyzing the four kinds of data.” (Demographic, Student Learning, Perceptions, Processes)

“**Abundant research and school evidence** suggests that setting (a few, simple, specific) goals may be the most significant act in the entire school improvement process.”

“Because we gather so much data... (that) reveal so many opportunities for improvement, we set too many goals and launch too many initiatives, over-taxing our teachers and our systems.

Educators must *Focus, Focus, Focus*.

- “Which data, well analyzed, can help us improve teaching and learning?”
- Within an identified subject/course, where do we need to direct our attention?
- Where do the greatest number of students struggle or fail within the larger domains?

Mike Schmoker 2003

**Backward Design of Assessments**—Three stages to the process:

- First: Determine student-learning goals
- Second: Collect, analyze and interpret evidence from multiple sources of data to determine how students are doing
- Third: Consider the root causes of present achievement levels and then—and only then—implement systematic actions to address root causes, promote enduring learning, and increase test scores.

Jay McTighe and Ronald S. Thomas 2003

**Teacher Questions About Data** — Teachers should ask themselves the following:

- Do my classroom assessments measure genuinely worthwhile skills and knowledge?
- Will I be able to promote my students’ mastery of what’s measured in my classroom assessments?
- Do my classroom assessments yield results that allow me to tell which parts of my instruction were effective or ineffective?
- Do my classroom tests take up too much time away from my instruction?

W. James Popham 2003

**Excerpts Regarding Feedback:**

• Feedback must be timely and unambiguous. It must be diagnostic in nature... it is necessary to establish learning goals and improve achievement outcomes. Administrators that encourage teachers to collect, organize and evaluate school and classroom data to inform their practice can help improve a school. “Educators who want to ensure student learning must make use of formative assessment and feedback. Formative assessments are standards-based but have as their sole purpose student learning; There are no immediate consequences for poor performance--thus no high stakes. These are designed only to support learning.” Charlotte Danielson, 2002-2003

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Micro-Feedback Data Loops  
**Research Results for Providing Feedback**

<b>Authors of Study</b>	<b>Average Effect Size (Std.Deviation)</b>	<b>Percentil Gain in Student Achievement</b>
<b>Lysakowski &amp; Walberg 1981, 1982</b>	<b>0.92</b>	<b>32%</b>
	<b>0.69</b>	<b>25%</b>
	<b>0.83</b>	<b>30%</b>
	<b>0.71</b>	<b>26%</b>
	<b>1.15</b>	<b>37%</b>
<b>Tennenbaum &amp; Goldring 1989</b>	<b>0.49</b>	<b>19%</b>
	<b>0.55</b>	<b>21%</b>
	<b>0.19</b>	<b>7%</b>
<b>Kumar, 1991</b>	<b>1.35</b>	<b>41%</b>
<b>Scheerens &amp; Boster, 1997</b>	<b>1.09</b>	<b>36%</b>
<b>Haler, child &amp; Walberg 1988</b>	<b>0.71</b>	<b>26%</b>

**Research Results for Homework**

<b>Use of Homework</b>	<b>Average Effect Size (Std. Dev.)</b>	<b>Percentil Gain in Student Achievement</b>
<b>Homework assigned, but not graded/commented on</b>	<b>.28</b>	<b>11%</b>
<b>Homework graded, but without comments</b>	<b>.78</b>	<b>28%</b>
<b>Homework graded, with teacher comments as feedback</b>	<b>.83</b>	<b>30%</b>

Source: Maarzano et. al, "Instructional Strategies that Work," .ASCD Yearbook 2001.

# Micro-Feedback Data Loops

## Feedback

**Feedback Defined: Providing students with feedback relative to how well they are doing.**

**Research:** (\*+26% impact on student performance outcomes) \*(separated from goal setting)

- Hattie (1992) “ The most powerful single modification that enhances achievement is feedback. The simplest prescription for improving education must be “dollops of feedback.” (p.9)
- Telling “right” or “wrong” has negligible effect if done after each item.
- Best: explain what is accurate and what is inaccurate
- Feedback must be timely--immediate or day after.
- Feedback needs to be specific to a criteria, informing students where they stand relative to a specific knowledge or skill component.
- Feedback can be provided by students, themselves and/or classmates.
- Rubrics can be especially useful for providing more feedback than a single number or score. A general format is below:

### Generic Rubric for Skills/Processes

- 5: Student can perform the skill/process important to the topic with no sig. errors, with fluency and key features
- 4: Student can perform the skill/process important to the topic with no sig. errors
- 3: Student makes some significant errors in performing the skill/process important to the topic, but roughly understands key features.
- 2: Student makes many errors in performance such that s/he cannot perform the skill/process.
- 1: No judgment can be made about the student’s understanding.

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**Micro-Feedback Data Loops**  
**9 CHARACTERISTICS OF SCHOOLS**  
**WITH GREAT ACADEMIC GAINS**

Douglas Reeves, ASCD, 2004 p. 70-73

**1. Collaboration:**

- a. Examination of student work
- b. Collective determination of what “proficiency” means regarding student work  
NOT: idle discussion, simple friendly, collegial gatherings

**2. Feedback:**

- a. Much more feedback to students
- b. Feedback provided in “real time”
- c. Accuracy of feedback emphasized  
NOT: ambiguous, delayed, distorted

**3. Time:**

- a. Changes in schedule to accommodate priorities
- b. More time give to “literacy” and “numeracy”  
NOT: moving players on the “chess-board”

**4. Action Research/Midcourse Correction:**

- a. Dynamic, ongoing, evolving process
- b. Exploring & sharing ideas and options  
NOT: Static, stale, past-history documents

**5. Aligning Teacher Assignments with Teacher Prep:**

- a. Decisive moves to align staff with interest, competence, & background training
- b. Move to diff. grades/subjects  
NOT: Newest teachers get toughest class assignments

**6. Constructive Data Analysis:**

- a. Focus on student data from multiple sources
- b. Cohort data vs. year to year (track same students)  
NOT: Comparing students to other students

**7. Common Assessments:**

- a. Teacher constructed
- b. Student completes a task--receives feedback designed to improve performance  
NOT: More testing, but-- more *assessing*

**8. Valuing Every Adult as a Resource for Students:**

- a. Inclusive professional development
- b. All are part of the journey & impact students  
NOT: Certified staff only, on isolated efforts

**9. Cross-Disciplinary Integration:**

- a. All subject areas are involved for transfer
- b. Sub-sets of standards cut across areas, and as such, staff collaborate to address similar concepts.  
NOT: A mere focus on tested subjects only

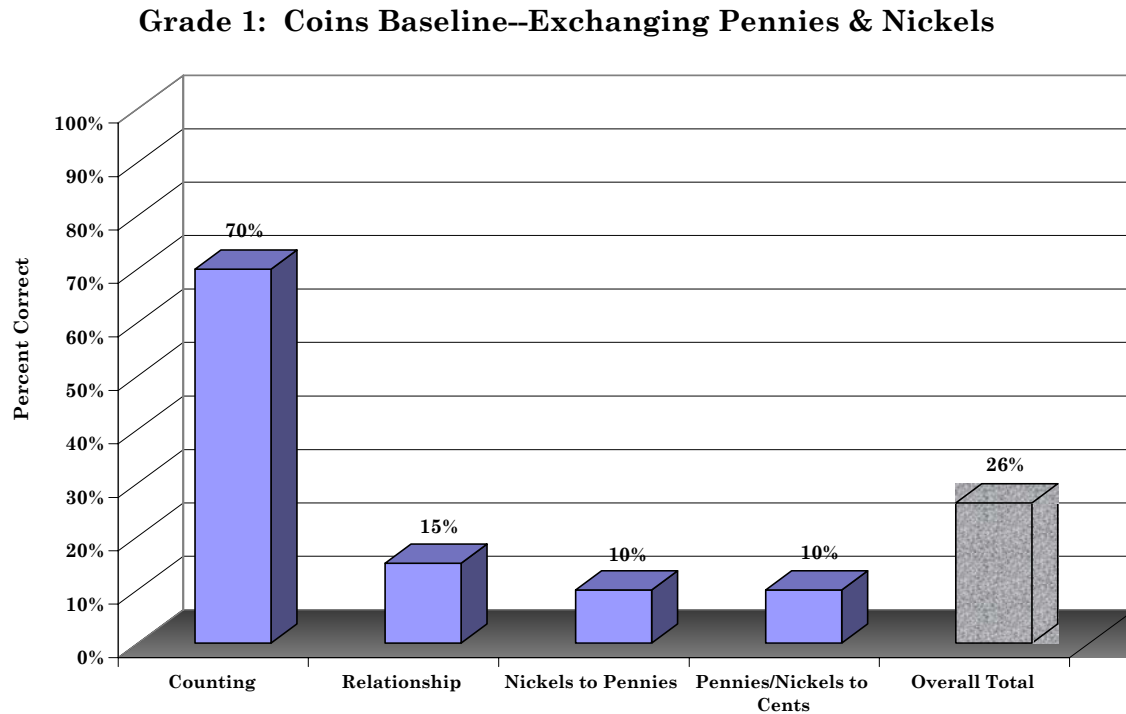
**Micro-Feedback Data Loop Process**

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## Micro-Feedback Data Loops

1. **Target a standard of student underperformance**
2. **Select a sub-component to focus upon for a set of lessons**
3. **Determine the prerequisite skills or knowledge needed for a learner to be successful**
4. **Locate/draft an assessment item for each item identified in #3**
5. **Teach lesson, assess, collaborate**



## Micro-Feedback Data Loops

### Initial Student Performance

### After First Lesson

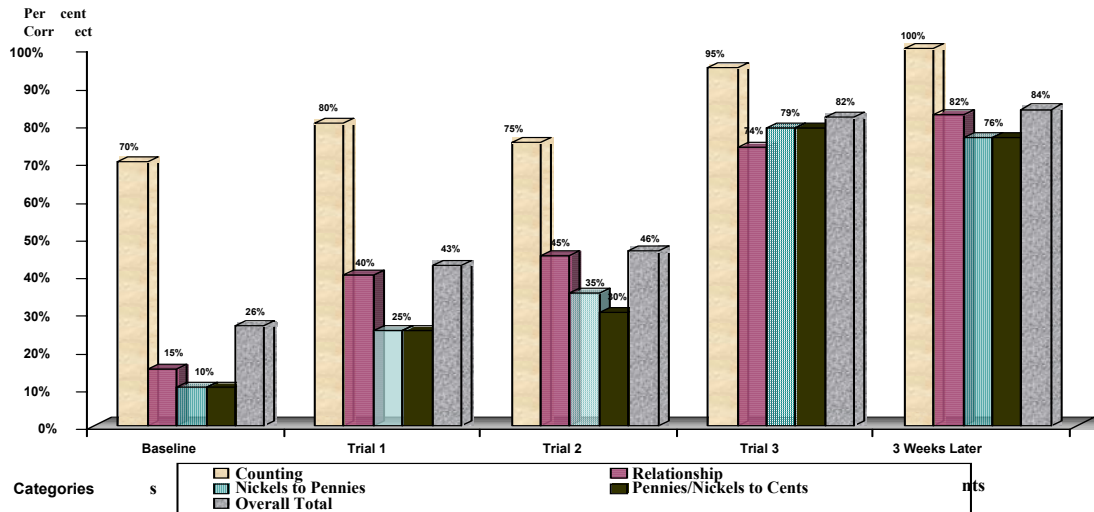
	Baseline					Trial 1					
	Student Name	#1	#2	#3	#4	Total	#1	#2	#3	#4	Total
1	Nashara	0	0	0	0	0	0	0	0	0	0
2	Desmond	1	0	0	0	1	1	1	0	0	2
3	Aniyah	1	0	0	0	1	1	1	0	0	2
4	Nigel	1	0	0	0	1	1	1	0	0	2
5	Christopher	1	0	0	0	1	1	0	0	0	1
6	Seirra	1	0	0	0	1	0	0	0	0	0
7	Pleasant	0	0	0	0	0	1	0	0	0	1
8	Randy	1	1	1	1	4	1	1	1	1	4
9	Trishawna	1	1	1	1	4	1	1	1	1	4
10	Herman	1	0	0	0	1	1	0	0	0	1
11	Malaysha	1	0	0	0	1	1	0	0	0	1
12	Nashean	1	0	0	0	1	1	1	1	1	4
13	Naromi	0	0	0	0	0	1	0	0	0	1
14	Julian	1	0	0	0	1	1	0	0	0	1
15	Kenda	1	0	0	0	1	1	1	1	1	4
16	Kendale	0	0	0	0	0	1	0	0	0	1
17	Desteny	1	0	0	0	1	1	1	0	1	3
18	Breana	1	1	0	0	2	1	1	0	0	2
19	Isaac	0	0	0	0	0	0	0	0	0	0
20	Generie	0	0	0	0	0	0	0	0	0	0
Class Totals		14	3	2	2	21	16	9	4	5	34
Total Possible		20	20	20	20	80	20	20	20	20	80
Gr. 1 Percent		70%	15%	10%	10%	26%	80%	45%	20%	25%	43%

### Feedback Loop Data Representation

### Representation

Grade 1 All Trials: Exchanging Coins (Penny & Nickel)

Nickel



© Patent Pending:

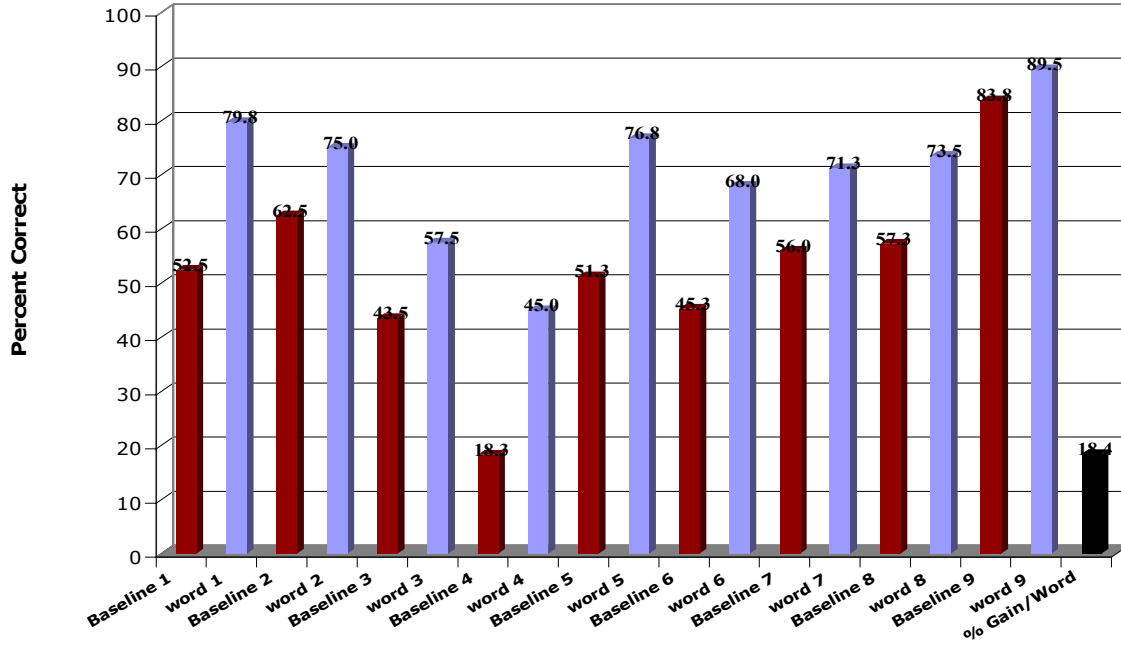
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# Micro-Feedback Data Loops

## EHHS Science Vocabulary



**WORDS: Baseline and After Instructional Strategy**

Micro-Feedback Data Loops

<p><b>Teacher Collaboration for Student Outcomes Meeting Record Template</b></p>
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**Teacher:**

**Date:**

**3 Minutes**

<p><b>#1: Lesson/ Objective</b> Concisely state the specific</p>	<p><b>#2: Approach to Lesson</b> How did you approach this lesson?</p>	<p><b>#3: Evidence</b> Identify the source of evidence used as a basis for identifying and discussing the student(s) needs.</p>
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**5 Minutes**

<p><b>#4: Discussion about <i>Class</i> Learning Needs</b> How did the class perform on this item? Based on the</p>	<p><b>#5: Identify Specific <i>Student</i> Learning Needs</b> How did individual students perform? Who could use more help? On what item/skill first?</p>
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**5 Minutes**

<p><b>#6 Exploring Options for Stu- dent Learning:</b> What ideas/additional/alternative approaches might be</p>	<p><b>#7 Mapping Student Learning Feedback:</b> What concrete, measurable“evidence” can be collected to provide feedback on student performance?</p>
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