Appendix A.

Chronology of FM Activities- Concord School District 2013-14

New Hampshire Department of Education Focused Monitoring

Concord School District

Achievement Team Meeting

Friday September 13, 2013

SAU Office

8:00 Welcome and Introductions

Outcomes for the Day

- Develop a common understanding of the NHDOE FM process
- Establish meeting norms
- Generate and categorize "reasons for the gap"
- Review of district initiatives and consider alignment with FM work
- Synthesize today's information and consider items for October meeting

Overview of Focused Monitoring (Math focus)

- Essential Question, 5-Step Inquiry Process, Outcomes, etc
- Meeting Norms
- Roles
- Plan for Communication

8:30 Activity: "Reasons for the Achievement Gap in the Concord School District"

10:00 BREAK!

10:15 Alignment of Work: Current District Initiatives

- Math (Linda Stuart)
- Other (Chris Demers)

11:00 Narrowing the Focus: (Parking Lot)

- What rises to the surface from our work today? (Sticky Dots)
- Implications for our continued FM work?
- What more information do we need?
- Next Steps...

11:45 Wrap Up:

- PCI's
- Action Items; assignments
- Communication Plan: Talking Points
- Plymouth State University: 6 graduate credit course
- Food Discussion

12:00 Adjourn...Thank You!

New Hampshire Focused Monitoring and School Improvement
Concord School District
Achievement Team
Friday October 18, 2013
8:00-12:00

8:00 Welcome and Housekeeping

- Outcomes of today's meeting
- Norms/Roles: recorder, historian, scribe, timekeeper, jargon buster, process observer
- Review of 9/13/PCIs
- Report out on "Talking Points"

8:20 Introduction to "Seven Turn Around Principles"

8:30 Return to Index Card Survey: "Causes of the gap"

- Disabilities Distribution in NH
- "Dot" placement (9/13/13)
- Index Card Survey: summary of faculty feedback (charts)
- Reactions/discussion
- Reflection Paper

9:00 "Solutions for the gap" preliminary discussion
FM Essential Question: "What are the contributing factors to the achievement gap between students with disabilities and their non-disabled peers and **how may this gap be narrowed**?"

- "Solutions" to the gap: individual thoughts
- Index Card Survey: small groups with faculty survey feedback
- Categorize by "7 Turn Around Principles"
- Discussion
- Reflection Paper

9:45 BREAK

10:00 Math Performance Data Continued (Chris Rath, Chris Demers, Linda Stuart)

- Reflection Paper

10:30 Special Education Presentation (Bob Belmont and company)

- Reflection Paper

Moved to Next Month

11:15 Open Group Discussion

- "Think/Pair/Share": synopsis of Reflection papers
- Report Out

11:45 Wrap Up

- PCIs
- Plymouth State University
- Feedback from Process Observer
- Talking Points (Disability Distribution in NH?)
- Homework: article(s)
- Action Items

12:00 Lunch

New Hampshire Focused Monitoring and School Improvement
Concord School District
Achievement Team
Friday November 15, 2013
8:00-12:00

Outcomes for Today's Meeting:

- To Develop a Common Understanding of Six "Best Practices" Articles
- To Acquire a Deeper Understanding of Special Education Operations in the Concord School District
- To Introduce john Hattie's Mega-analysis of Effective Instructional Practices
- To Narrow the Focus of "Solution for the Gap"
- To Continue to Refine FM Focus Areas

8:00 Welcome and Housekeeping

- Norms/Roles
- Review of 10/15/13 PCI's
- Report Out on Talking Points

8:15 Articles: "Best Practices"

- 4 A's Protocols
- Scribe

9:15 Special Education Operations: Concord School District

- Reflection Form

10:00 Synthesis of "Solutions Charts

- Chart Activity
- Scribe

10:30 BREAK!

10:45 John Hattie Mega-Analysis Research: Dr. Robert Greenleaf

11:45 Wrap Up

- PCI's
- Process Observer Report Out
- New Talking Points
- Homework?
- Action Items
- Next Meeting: Friday December 13, 2013

12:00 Adjourn...Thank You!

New Hampshire Focused Monitoring and School Improvement
Concord School District
Achievement Team
Friday December 13. 2013
8:00-12:00

Outcomes for Today's Meeting

- To complete the report on Special Education
- To review LT work on "synthesizing" solutions and complete that work
- To analyze *impact* and *control* of selected solutions
- To arrive at consensus on focus area(s) for Action Planning

8:00 Welcome and Housekeeping

- Norms/Roles
- Review of 11/15/13 PCI's
- Report out on Talking Points
- Beaver Meadow School: Focus School update

8:30 Special Education Presentation (continued)

9:00 "Solutions" Synthesized

- Report on Leadership Team work
- Complete #6: Instructional Practices

9:30 Open Discussion: Patterns and Trends for Action Planning?

10:15 BREAK

10:30 "Affinity Diagram": Impact and Control

11:00 Continuation of 9:30 Agenda Item: Action Planning

11:45 Wrap Up

- PCI's
- Carol Kosnitsky: Concord dates?
- Talking Points?
- March date change to 3/21/14
- Other?

12:00 Adjourn...Happy Holidays!

New Hampshire Focused Monitoring and School Improvement
Concord School District
Achievement Team
Friday January 17, 2014
8:00-2:45

Outcomes for Today's Meeting

- Provide an FM "road map"
- Review "best practices" for improving student performance
- Continue to refine FM focus areas
- Introduce Short Cycle PDSA process (Math)
- Consider formation of FM subcommittees

8:00 Welcome and Housekeeping

- Norms and Roles
- Review of December 13, 2013 PCI's
- Report out on Talking Point

8:30 The FM "Road Map"

- Where have we been"
- Where are we now?
- Where are we going?

9:15 Best Practices that Improve Student Performance

- Review: 6 articles (4A's Protocol Synthesis), Hattie's "Top Ten", new Hattie article (to be provided), Dylan Wiliam videos
- Large group discussion

10:15 BREAK

10:30 "Museum Walk": CSD preliminary Action Plan objectives

11:15 Refining CSD's Objectives (small groups)

- Points to consider: clear link to narrowing the Math gap; focus on SWD's; singular, specific, and measurable tasks; clarity of language

12:00 LUNCH

12:45 Continuation: Refining Objectives and Discussion

1:30 Return to Affinity Diagram: Impact and Control
- "Impact": clear connection to improving student performance
- "Control": SOME people in the district can put this in place
- Consolidation of charts: what emerges as viable for Action Plan
- Subcommittees?

2:00 Assorted Items
- Short-term problem solving model: OGAP (math), Algebra Team
- Dylan Wiliam text: how to use, who's responsible
- Visits to special education programs

2:20 Wrap Up
- PCI's
- Talking Points – "vetting" objectives with faculty
- PSU?
- Other

2:45 Adjourn

New Hampshire Focused Monitoring and School Improvement
Concord School District
Achievement Team
Friday March 21, 2014
8:00 am-2:45 pm

Outcomes for Today's Meeting:

- Refine FM focus areas: concrete objectives with measurability and specificity
- Provide Math curriculum updates
- Hear presentation on Formative Assessment and Feedback
- Form of FM subcommittees
- Begin to develop goal for Action Plan and method of measurement

8:00 Welcome and Housekeeping

- Norms and Roles
- January 17 PCI's
- Update on Math: "big picture" (Chris Rath)

8:30 Continued Action Planning: GOAL development

- Method of measurement
- Baseline
- Target
- Timeframe

9:15 Presentation: Formative Assessment and Feedback (Dr. Robert Greenleaf)

11:15 BREAK

11:30 Objectives "Reprise"

- "Wordsmithing" and swap
- Report out
- Subcommittee formation

12:15 LUNCH

1:00 Math Update (Linda, Carol, Sandy, John, Chris D.)

1:45 Action Planning Worksheet: Objectives Expansion

- Subcommittees: facilitator, recorder
- Report Out

2:30 Wrap Up

- PCI's
- "Vetting" the goal/objectives
- Homework/Action Items
- Meetings/observations: Beaver Meadow; Linda, et al: PDSA and OGAP, Algebra Double Block

2:45 Adjourn

Next Meeting: Friday April 11, 2014

New Hampshire Focused Monitoring and School Improvement
Concord School District
Achievement Team
Friday April 11, 2014

Outcomes for Today's Meeting:

- ✓ Finalize wording of the Action Plan objectives
- ✓ Determine if further work by C. Kosnitsky is to be part of Action Plan
- ✓ Reach consensus regarding the Action Plan goal
- ✓ Develop ideas for roll out and buy in for FM Action Plan
- ✓ Determine next steps for FM team

8:00 Welcome and Housekeeping

- Norms/Roles
- March PCI's
- Other?

8:30 Continued Action Planning:

- Model "action planning" for subcommittee objectives work (Diane and Kathy)

9:00 Subcommittee Work Time and Report Out

- Wording of objectives
- Review of Objectives Worksheets (next steps)
- "Fist to Five": (consensus)?

10:15 BREAK

10:30 Action Plan Goal

- Review Goal samples and draft CSD language
- Discussion: duration, measurement tool, baseline and target; other
- Return to MARC and Leadership Team

11:00 Roll Out and Buy In of Action Plan

- "Consultancy Dilemma" Protocol (National School Reform Faculty)

- Next Steps: Leadership Team, etc

11:45 Wrap Up

- PCI's
- Report out from Process Observer
- Homework/Action Items
- Other?

12:00 Adjourn

Leadership Team meeting to follow at 12:45

Next FM Meeting: May 16, 2014

New Hampshire Focused Monitoring and School Improvement
Concord School District
Achievement Team
Friday May 16, 2014

Outcomes for Today' Meeting:

- To hear a report on the April meeting with Carol Kosnitsky and possible connection to Action Plan
- To hear a report on the status of the Action Plan Goal
- To review work done by subcommittees on objectives
- To discuss next steps to completion of Action Plan
- To provide work time for subcommittees
- To participate in a "Consultancy Dilemma" regarding roll out of the Action Plan
- To determine any remaining work to wrap up Year I

8:00 Welcome and Housekeeping

- Norms/Roles
- April PCI's
- Report on Meeting with Carol K. (Bob Belmont) [Include in Action Plan?]
- IEP Review Compliance Report (?)

8:30 Action Plan Goal(s)

- Current status
- Action needed
- Next steps

9:00 Next Steps: Draft of Action Plan

- Review work done 4/11/14 (in same groups)
- Brief revision/refinement

10:00 BREAK

10:15 Review Subcommittee Work: 3 Objectives

- Subcommittees "swap" objectives
- Review
- Clarifying/probing question

11:45 Wrap Up

- PCI's
- Survey Monkey!!
- Report Out from Process Observer
- Action Items
- June 6 meeting??
- Other?

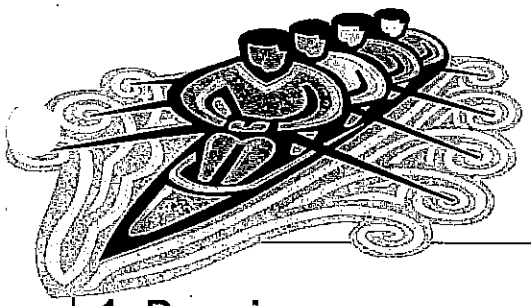
12:00 Adjourn/Working Lunch for LT

12:45 Leadership Team Meeting

NEXT MEETING (volunteers?): June 6, 2014; 2 hours(?)

Appendix B.

Norms for Collaboration



Norms of Collaboration
Annotated

1. Pausing
Pausing before responding or asking a question allows time for thinking and enhances dialogue, discussion, and decision-making.

2. Paraphrasing
Using a paraphrase starter that is comfortable for you – "So..." or "As you are..." or "You're thinking..." – and following the starter with an efficient paraphrase assists members of the group in hearing and understanding one another as they converse and make decisions.

3. Posing Questions
Two intentions of posing questions are to explore and to specify thinking. Questions may be posed to explore perceptions, assumptions, and interpretations, and to invite others to inquire into their thinking. For example, "What might be some conjectures you are exploring?" Use focusing questions such as, "Which students, specifically?" or "What might be an example of that?" to increase the clarity and precision of group members' thinking. Inquire into others' ideas before advocating one's own.

4. Putting Ideas on the Table
Ideas are the heart of meaningful dialogue and discussion. Label the intention of your comments. For example: "Here is one idea..." or "One thought I have is..." or "Here is a possible approach..." or "Another consideration might be...".

5. Providing Data
Providing data, both qualitative and quantitative, in a variety of forms supports group members in constructing shared understanding from their work. Data have no meaning beyond that which we make of them; shared meaning develops from collaboratively exploring, analyzing, and interpreting data.

6. Paying Attention to Self and Others
Meaningful dialogue and discussion are facilitated when each group member is conscious of self and of others, and is aware of what (s)he is saying <u>and</u> how it is said as well as how others are responding. This includes paying attention to learning styles when planning, facilitating, and participating in group meetings and conversations.

7. Presuming Positive Intentions
Assuming that others' intentions are positive promotes and facilitates meaningful dialogue and discussion, and prevents unintentional put-downs. Using positive intentions in speech is one manifestation of this norm.

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Appendix C.

7 Turn-around Principles

Factors That Influence Student Achievement

7 Turn-around Principles

- Leadership
- Effective Teaching
- Use of Data
- Environment/Culture
- Family and Community
- Instructional Practices
- Redesign of School Day

(Center for Comprehensive Reform and Improvement)

Turnaround Principles

1. **Providing strong leadership**
   - Ensure an effective principal is in place at the selected school (provide evidence) and support structures are provided to promote learning growth.
   - Provide differentiated support to school leaders around operational flexibility in the areas of scheduling, staff, curriculum and budgets.
   - Implement the state's Principal Evaluation Model, including weighting 20 percent of the evaluations on student growth.
2. **Ensure that teachers are effective and able to improve instruction** learning
   - Implement the state's Teacher Evaluation Model, including weighting 20 percent of the evaluations on student growth.

7 Turnaround Principles

adequate

3. **Redesign the school** day, week, or year to include **additional time** for student learning and teacher collaboration.

4. **Strengthen the school's instructional program** based on student needs and ensuring that the instructional program is research-based, rigorous, and aligned with College- and Career-Ready Standards.

5. **Use data to inform instruction** and for continuous improvement, including by providing time for collaboration on the use of data.

6. **Establish a school environment** that improves school safety and discipline and addressing other non-academic factors that impact student achievement, such as students' social, emotional and health needs.

7. **Provide ongoing mechanisms for family and community engagement.**

"Causes of the gap aligned with "7 Turn Around Principles"
Concord School District FM process
10/18/13

Achievement Team Data in RED

Faculty Data in BLUE

_____ is area of strong response from Achievement team and indicates coherence with staff responses

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1. Provide Strong Leadership

2. Effective Teaching Resulting in Improved Instruction

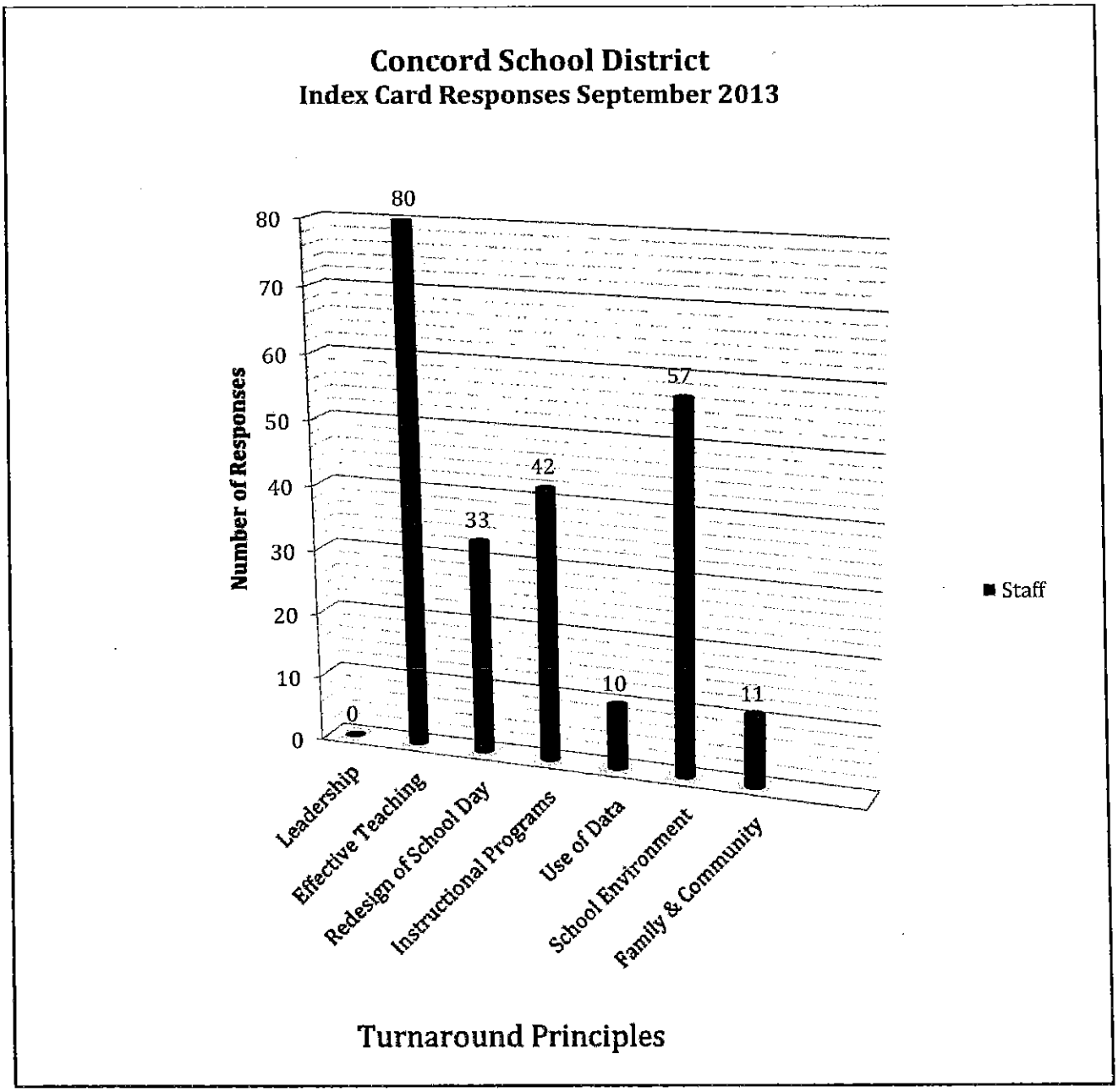
Interventions not coordinated; staff not trained – insufficient skills to meet students' needs; instruction not done with fidelity; inappropriate amount of time to deliver interventions; not enough variety to meet student needs; lack of consistency year to year; (lack of) teacher knowledge; attitude/mindset (students can't learn?); teachers' inability to differentiate/meet students' needs; teachers don't know "how" children learn Math; (not willing to) co-teach; IEPs not linked to curriculum/standards; (lack of) specialized instruction (special education)

Lack of time to instruct; interventions not meeting student needs; teachers unable to differentiate/meet individual student needs; IEPs not linked to curriculum; lack of specialized instruction; students lacking foundational knowledge; need more teachers (special ed) and more para's

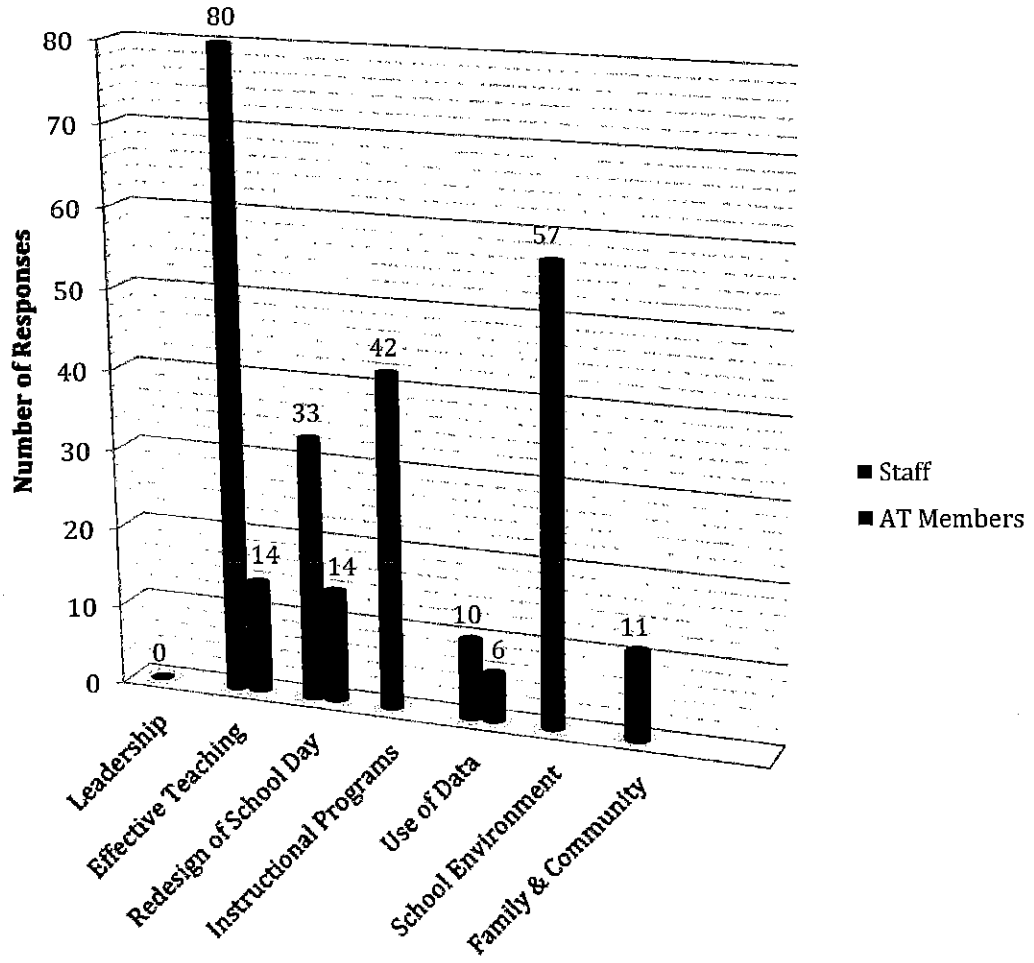
3. Redesign of School Day

Time: no time for interventions, staff training, collaboration; resources available but un-used; teachers trying to meet competing needs - less sense of urgency with Math than Literacy; difficult to meet student needs within existing schedules; instructional time is not "held sacred" (too many interruptions); unable to respond to students in a timely manner; service delivery model inadequate

No time for interventions; limited time for collaboration; schedule is problematic (not enough time to do what needs to get done); unable to respond to students in a timely manner; service delivery model inadequate; instructional time not held sacred


Concord School District
Index Card Responses September 2013
Number of Responses
80
70
60
50
40
30
20
10
0
0
80
33
42
10
57
11
Leadership
Effective Teaching
Redesign of School Day
Instructional Programs
Use of Data
School Environment
Family & Community
Staff
Turnaround Principles

Concord School District
Index Card Responses September 2013

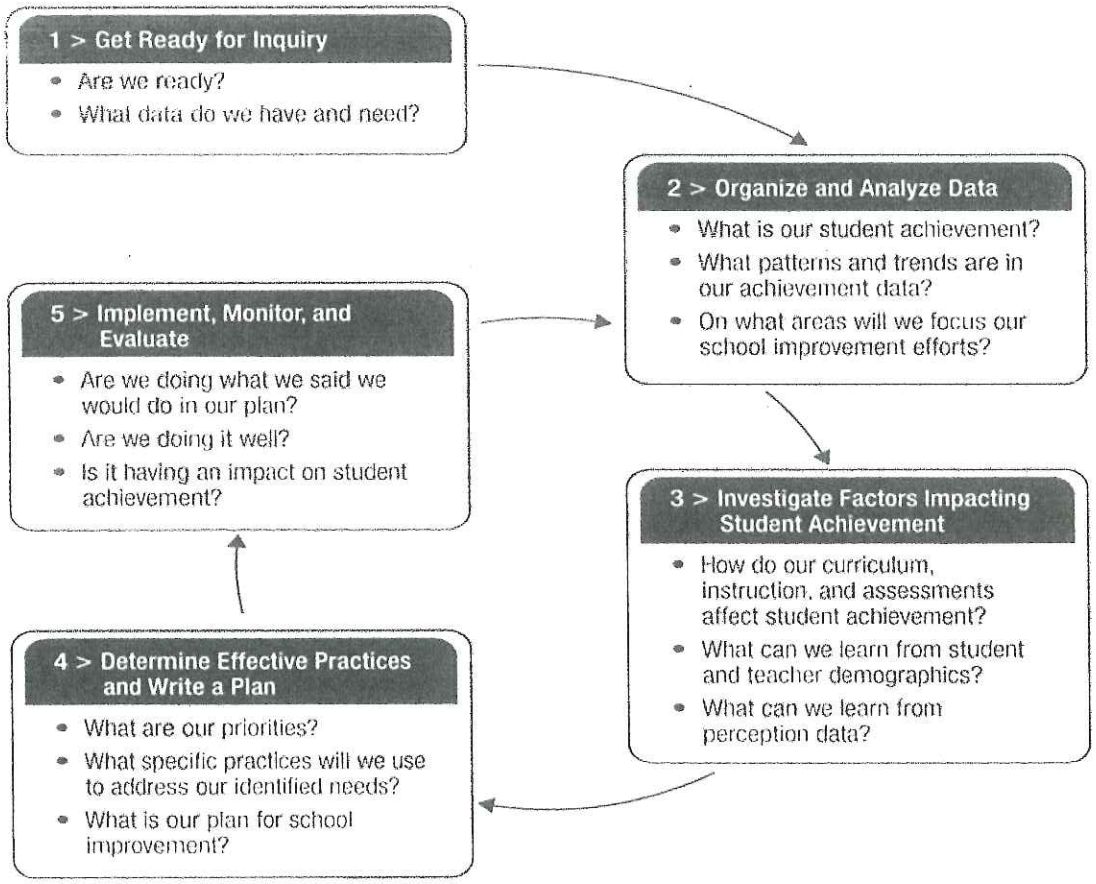


Turnaround Principles

Appendix D.

Cycle of Inquiry

Cycle of Inquiry



Appendix E.

District Math Survey

Events This Week

Tuesday, November 12 from 8:30-11:00 a.m. – Administrators visit Beaver Meadow School

Tuesday, November 12 at 3:45 p.m. – CEA monthly meeting (agenda includes review of proposed 2014-2015 calendar) at Rundlett Middle School in room 411. Please note that this is a new meeting place for this school year.

Friday, November 15 from 8:00 a.m.-noon – Focused Monitoring Achievement Team meeting, Central Office

Friday, November 15 from 12:45-2:45 – Focused Monitoring Leadership Team meeting, Central Office

Focused Monitoring Process Continues

ON FRIDAY, members of the Focused Monitoring Achievement Team and Leadership Team will meet for the third time this year.

Concord was selected as one of six Focused Monitoring school districts in New Hampshire this year due to the achievement gap in NECAP proficiency between students with IEPs and their non-disabled peers. As a result of a review of our NECAP data this past summer, the Leadership team made the decision to focus our study on the area of math. The Focused Monitoring Process is guided by one essential question: *What are the contributing factors to the achievement gap between students with disabilities and their non-disabled peers, and how will this gap be narrowed?*

The Focused Monitoring process gathers general and special educators together to analyze and understand the root cause of the achievement gap and develop a plan of action. The process provides us the opportunity to examine our current practices and identify areas of strength and areas in need of improvement. This work is a review of the "system" that we all work within, and asks us to determine how we can adjust and improve the system to support high levels of learning for all students, but particularly for our students with an IEP.

The Peaceable Community theme for November is Courage

Results of Focused Monitoring Survey

THANK YOU to all the staff who responded to the survey about the causes of the achievement gap between students with disabilities and those without identified disabilities. Following are some of the responses about the possible causes of the gap:

- Interventions with students are not well coordinated with classroom program or with other interventions
- Math instruction and interventions are not implemented with fidelity
- There is not enough time for interventions; it is difficult to meet student needs within existing schedules
- Instructional time is not "held sacred;" there are too many interruptions
- There is not a wide enough variety of interventions to meet student needs
- There is a lack of consistency in instruction from year to year
- Teachers don't have sufficient skills to meet students' needs and/or to differentiate instruction
- Students' IEPS are not linked to the curriculum/standards
- Pacing of math curriculum is too fast; not sure Everyday Math is the right program; we need to narrow the focus
- There are not enough resources for differentiation
- We need more teachers and teaching assistants; students need more time with special educators
- Staff "mask" students' lack of knowledge by doing things for them
- Assessments used are insufficient and/or inappropriate to assess student knowledge
- We are not using data to inform instruction; data is not valued
- We are not being intentional in data meetings; there is a need for facilitation training
- There is inadequate technology and inadequate technology to use data
- Student behaviors get in the way of learning and teaching
- "Math phobia" impacts student learning
- Not all teachers believe students can learn
- Families have a poor attitude toward education; families don't or can't get involved in student work
- Teachers do not have enough knowledge of math concepts

Congratulations to CHS Football Team for its Conference Win over Central High School

Concord High School has had a long rivalry with Central High School in Manchester, dating back to the early 1900s. Central High School had crimson red as its school color, but Concord High School had also taken the color red. The two schools decided that the winner of a league championship would keep its colors. Concord won and Manchester Central then chose forest green as its new school color.

Also, congratulations to Pam Beane, whose son Rob Law is the quarterback for the CHS football team. The next game is Saturday, November 16, at 1:00 p.m. against Exeter. (Note: CHS has had two assistant principals in its recent history go on to serve as principal at Exeter High School, Susan Ratnoff and Vic Sokul.)

Appendix F.

NECAP Math Gap Analysis

A Look at CSD Data

10/18/13

Enduring Understanding

Data can tell a story. The plot depends on the reader and the reader's purpose.

3-Phase Process

Source: *Got Data? Now What?* by Bruce Wellman and Laura Lipton

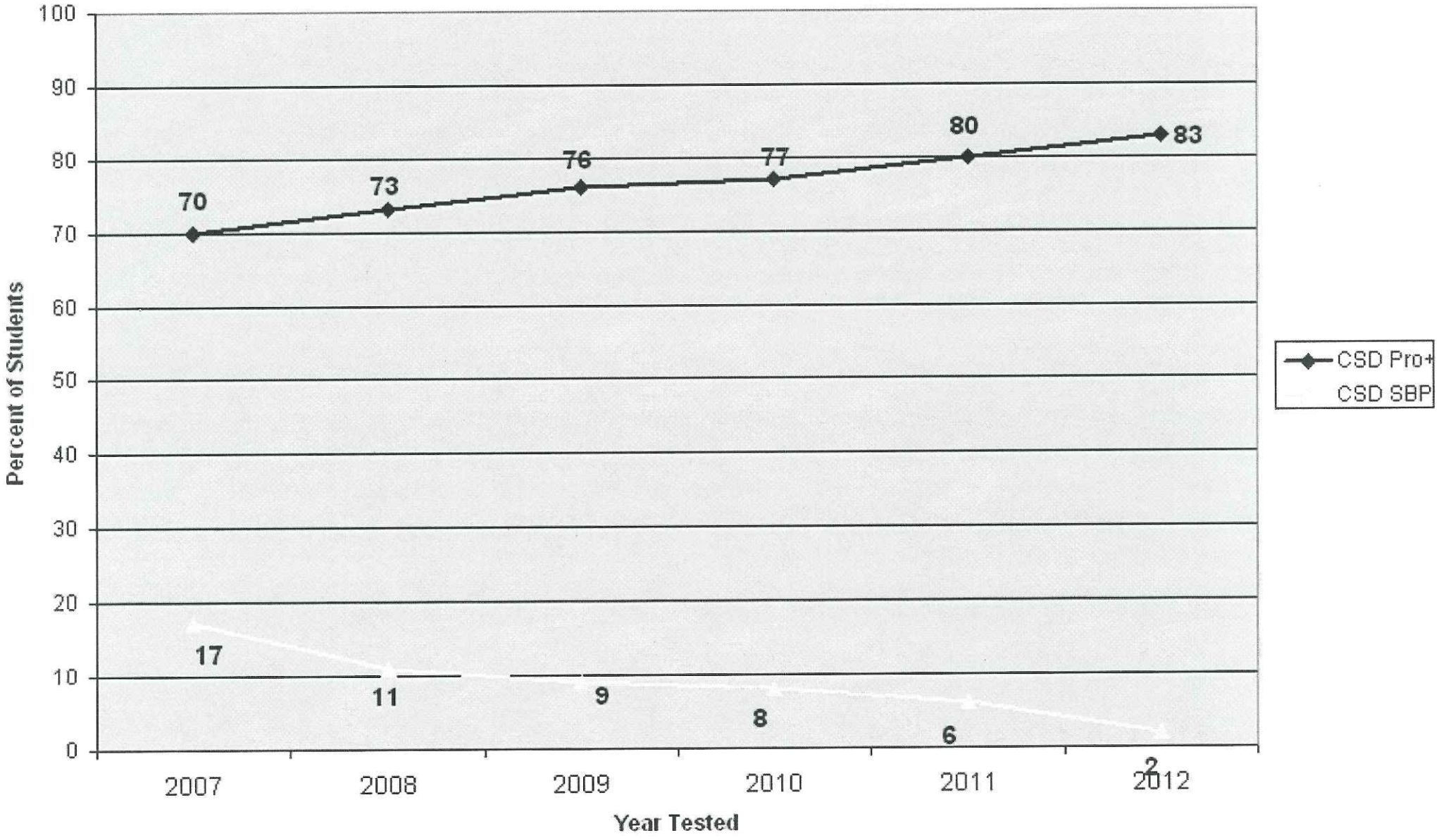
A Three Part Data Package...

1. Longitudinal **NECAP results** in **Reading** and **Mathematics** for the current **9th grade cohort**.
    - All Students
    - Students with Special Needs

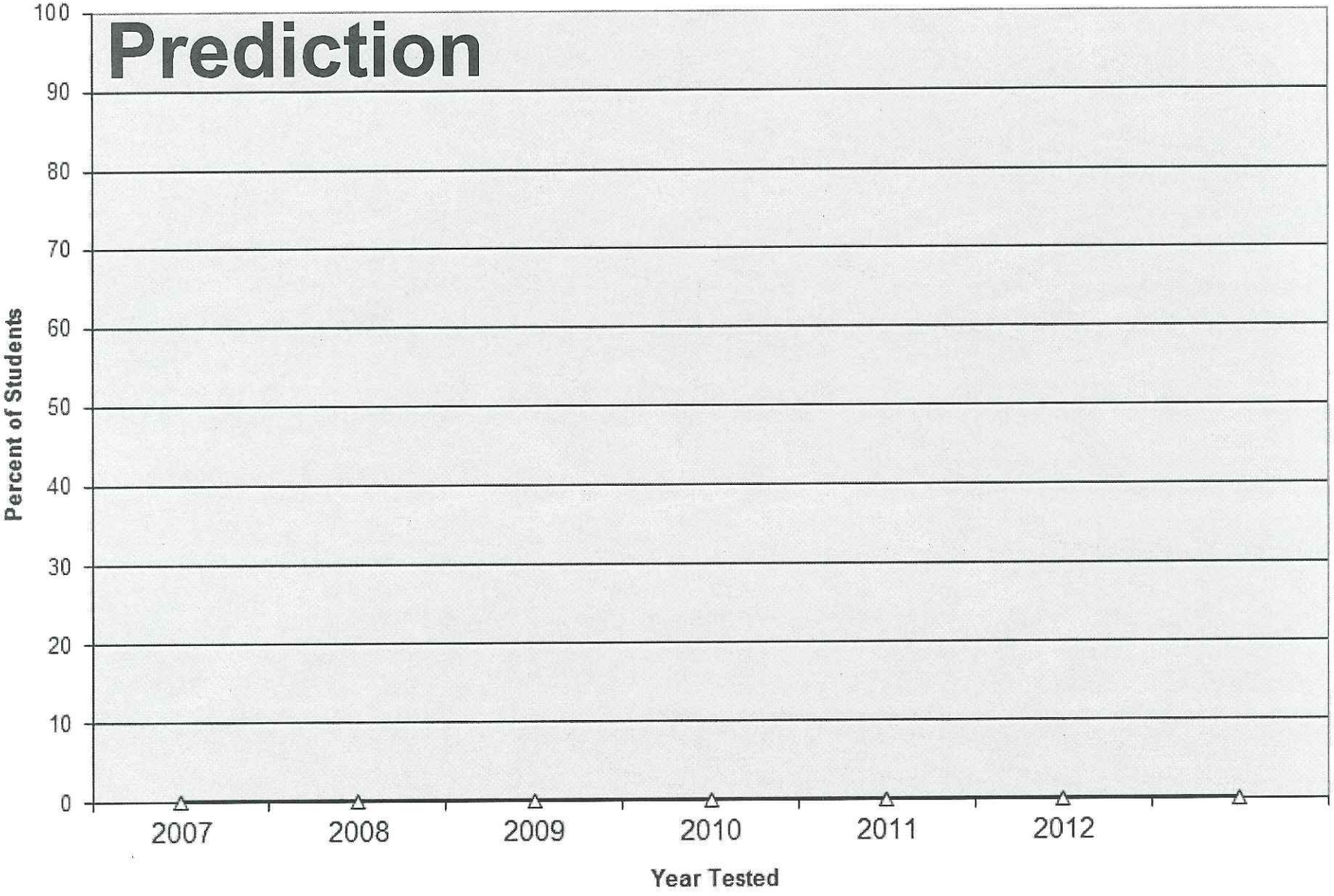
2. 5th and 6th grade **Profiles of Progress** results in **EDM** for the current **7th grade cohort**.
    - Non-Identified Students
    - Students with Special Needs

3. 3rd Grade **FASTT Math** results for the current **4th grade cohort**.
    - Students with Special Needs

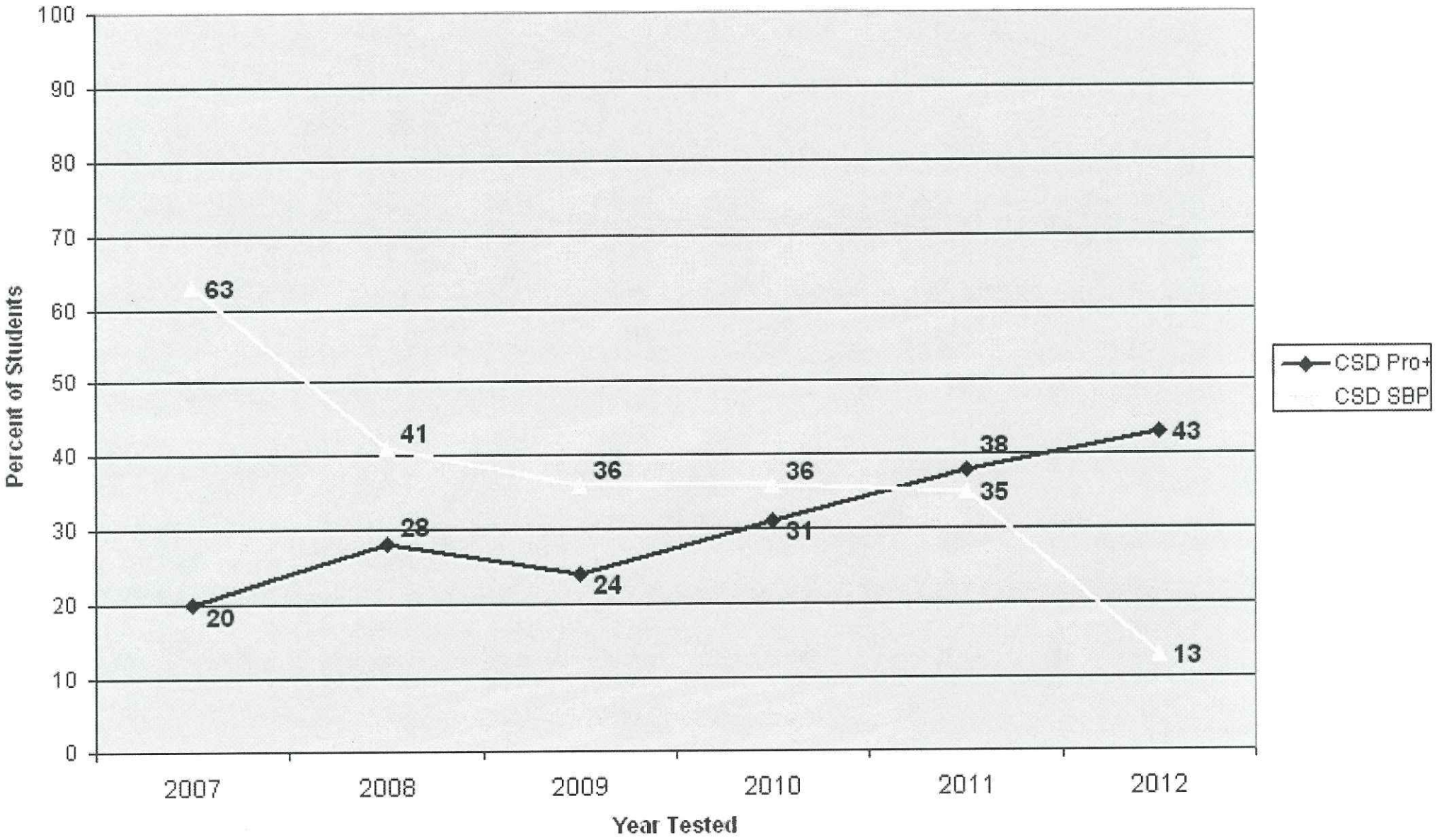
CSD 8th Grade Cohort Reading Results - ALL Students



CSD 8th Grade Cohort Reading Results - SPED

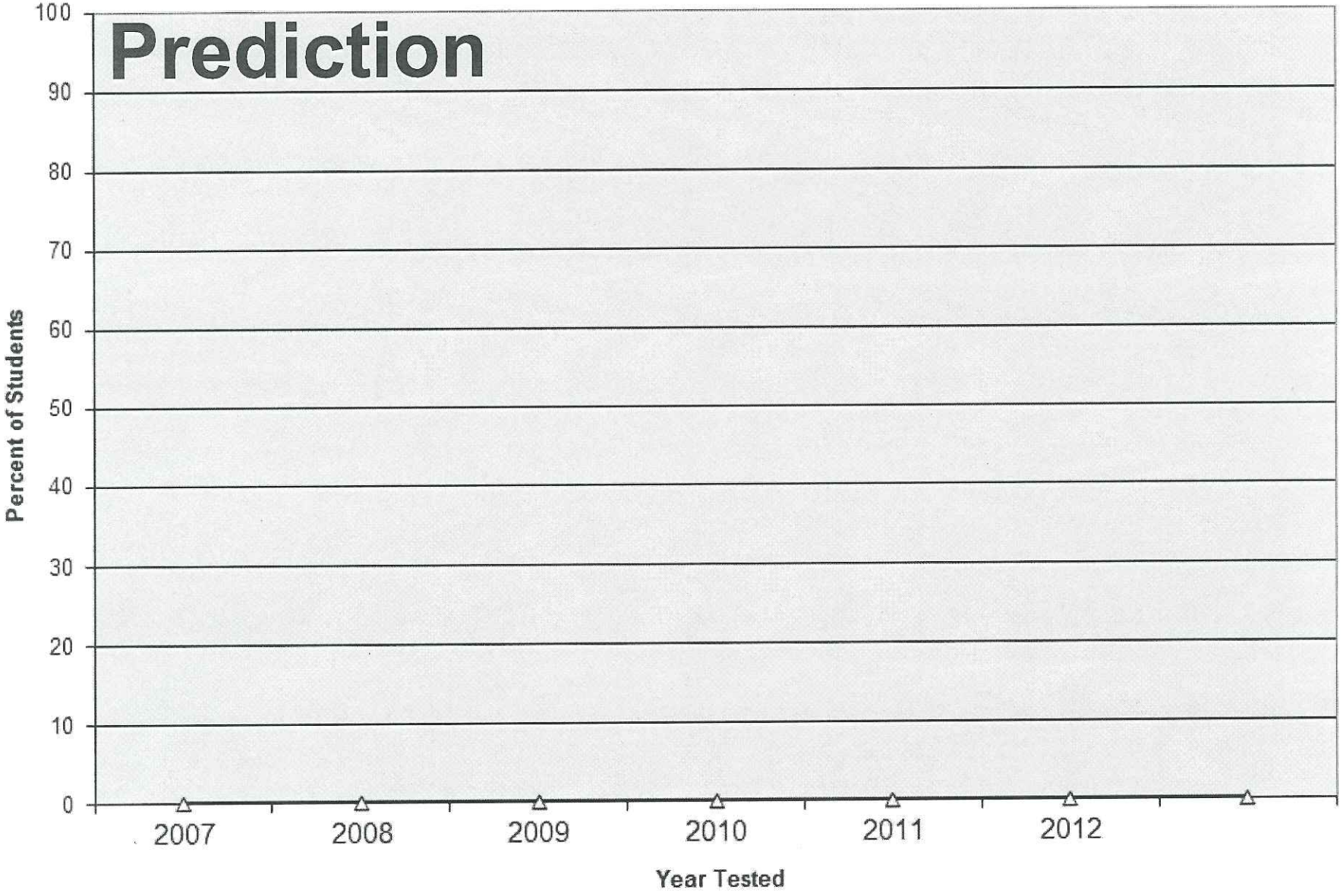


CSD 8th Grade Cohort Reading Results of SPED Subgroup



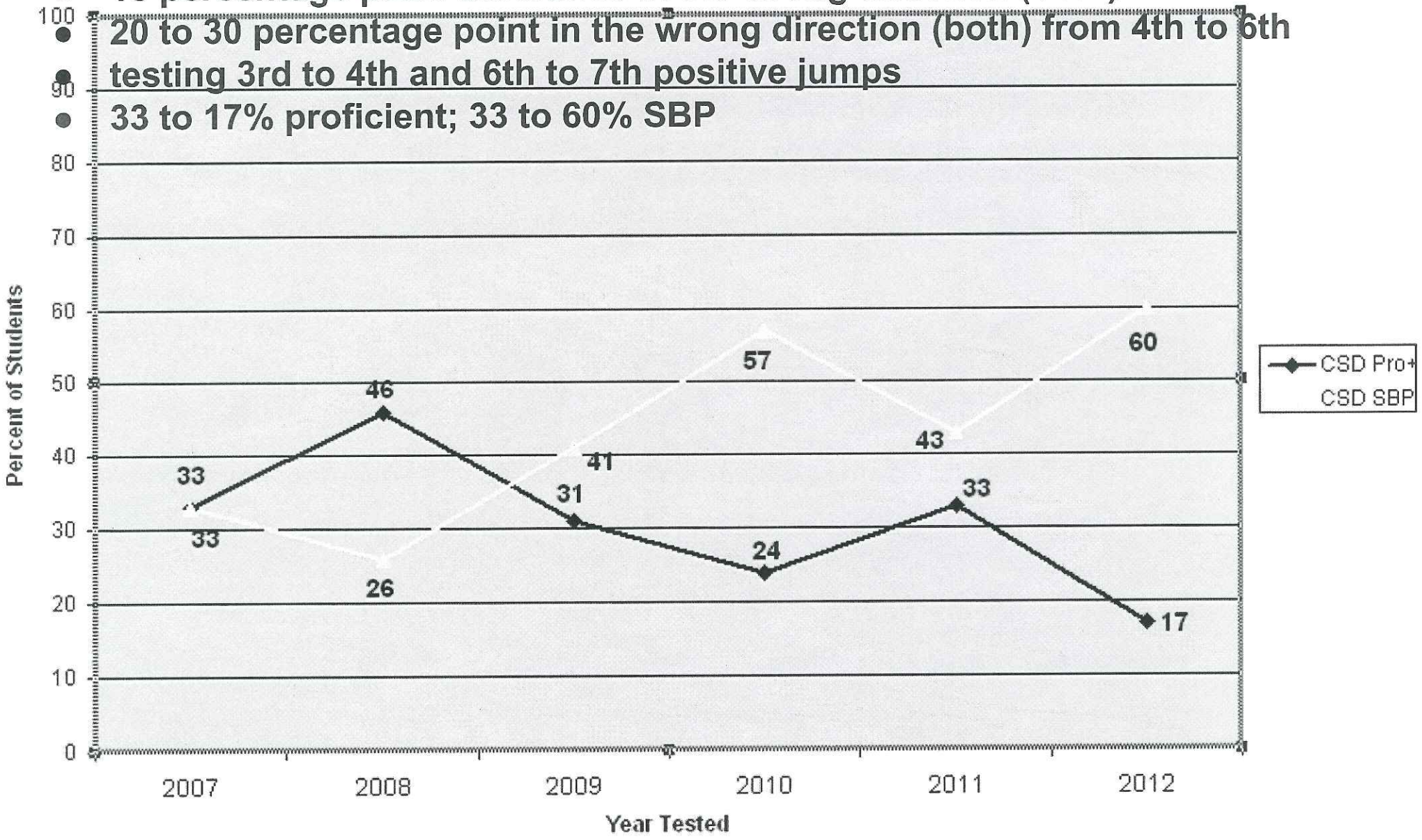
Observations

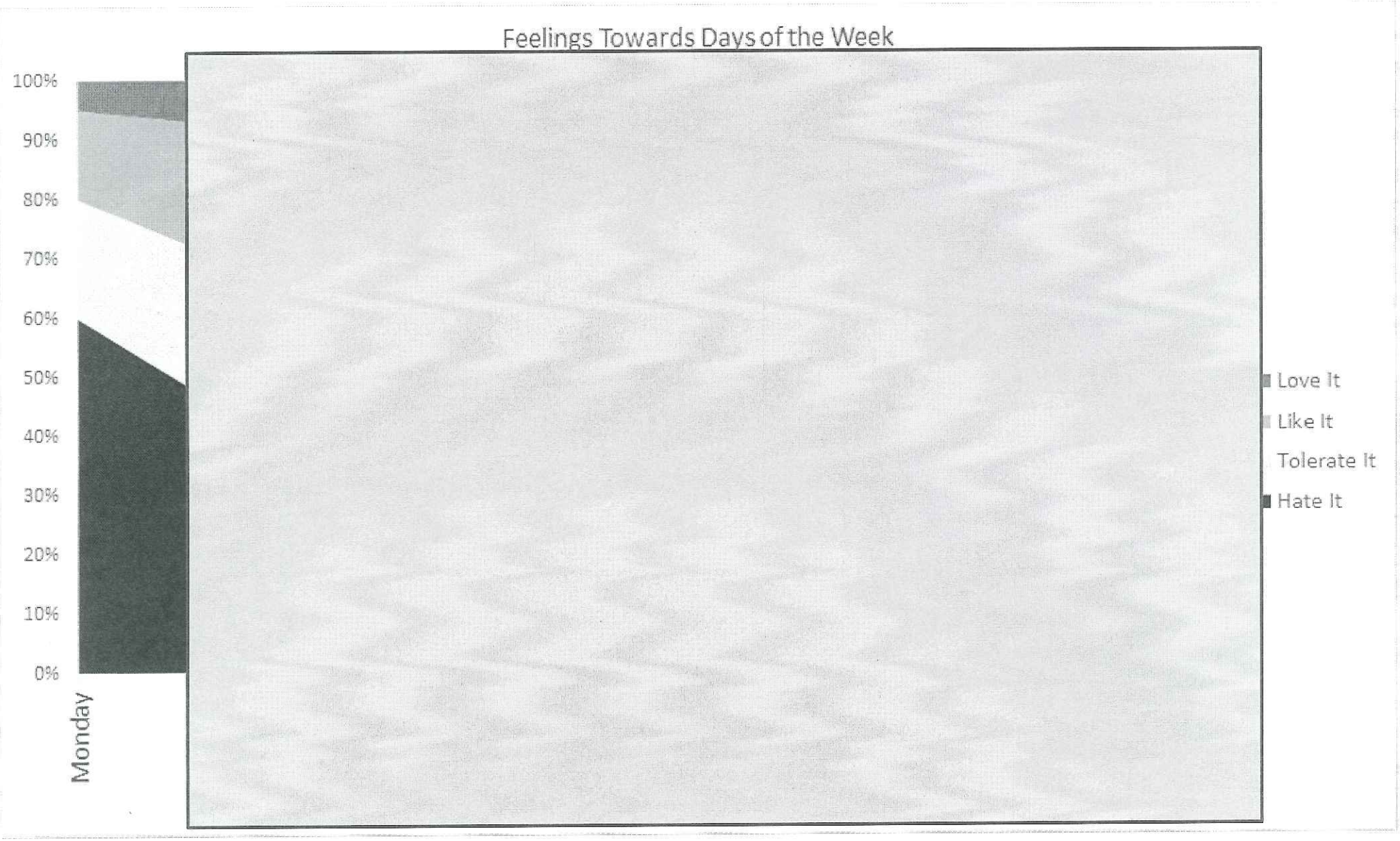
CSD 8th Grade Cohort Math Results - SPED



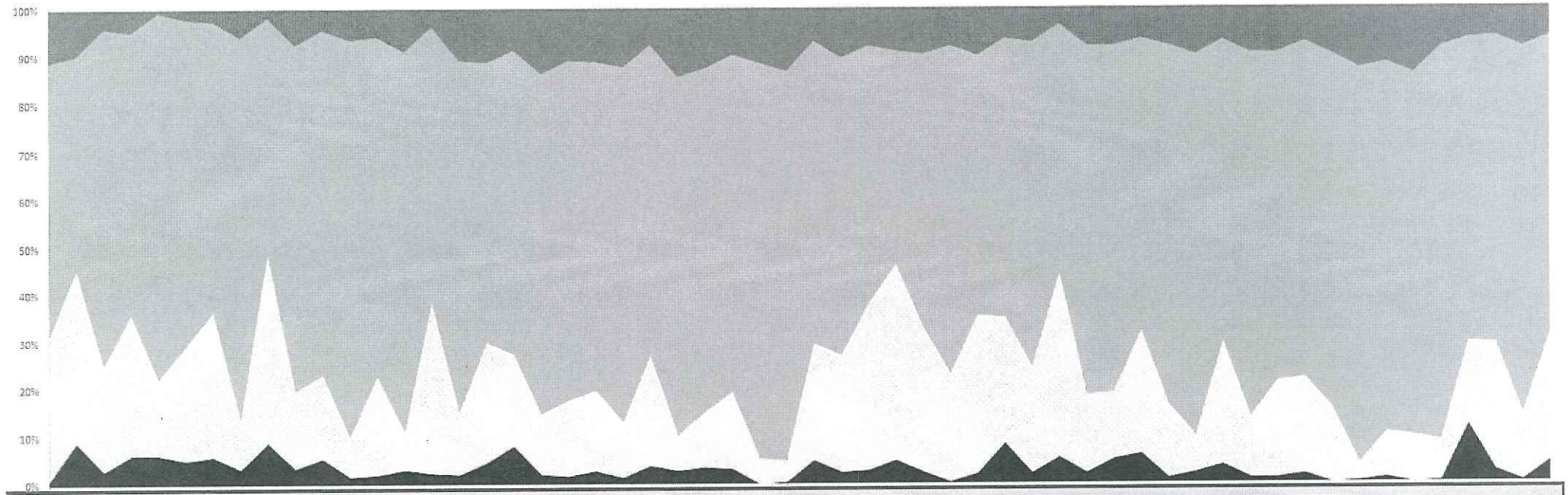
CSD 8th Grade Cohort Math Results of SPED Subgroup

- 15 percentage point difference in the wrong direction (both) from 7th to 8th
- 20 to 30 percentage point in the wrong direction (both) from 4th to 6th
- testing 3rd to 4th and 6th to 7th positive jumps
- 33 to 17% proficient; 33 to 60% SBP

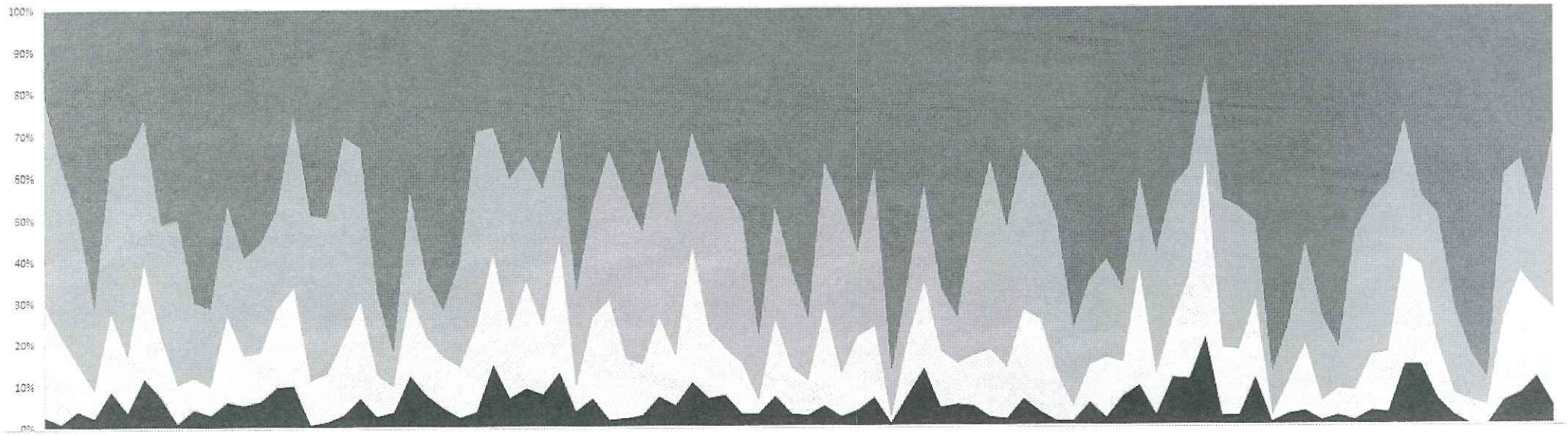



Feelings Towards Days of the Week
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Monday
Love It
Like It
Tolerate It
Hate It

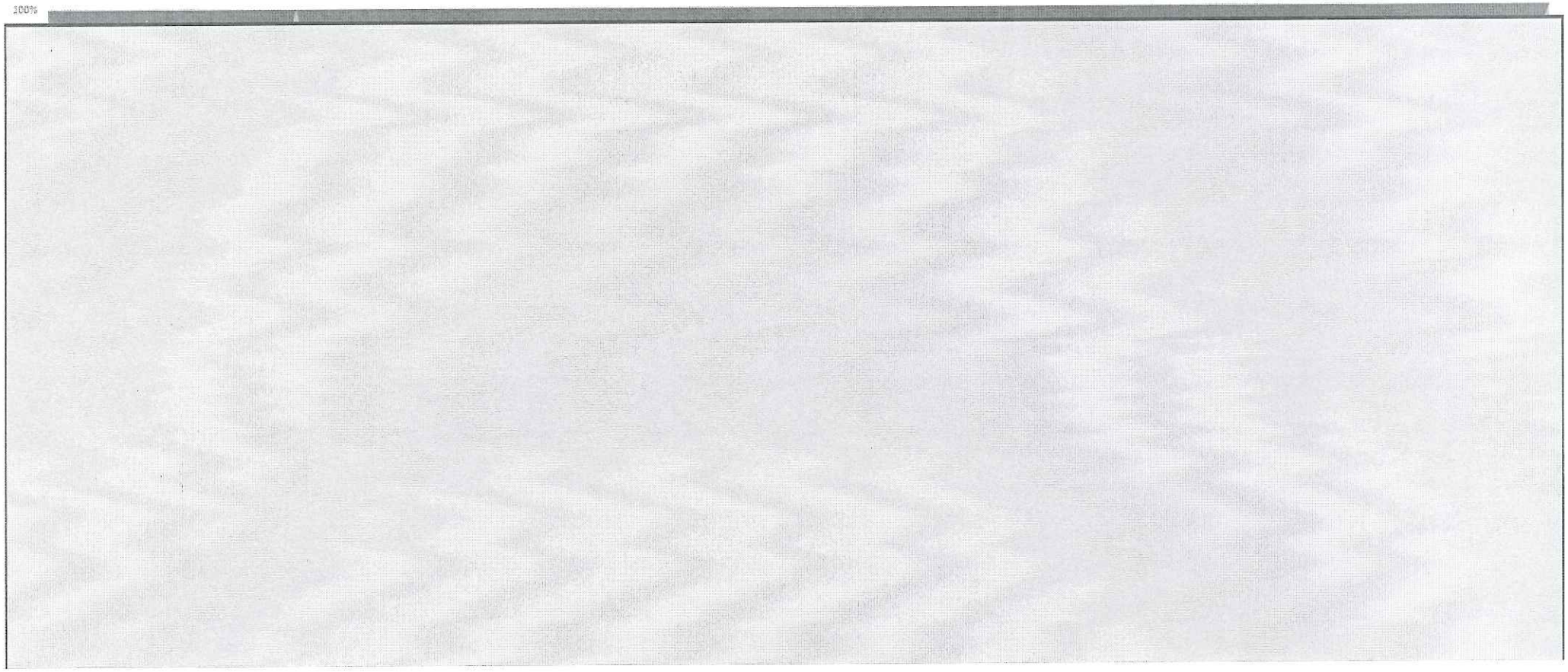
2011-12 Gr5 EDM non-SPED



2012-13 Gr6 EDM non-SPED



2012-13 Gr6 EDM SPED



District Story

FASTT Math Implementation Report

Time Period: 10/01/12 - 10/15/13

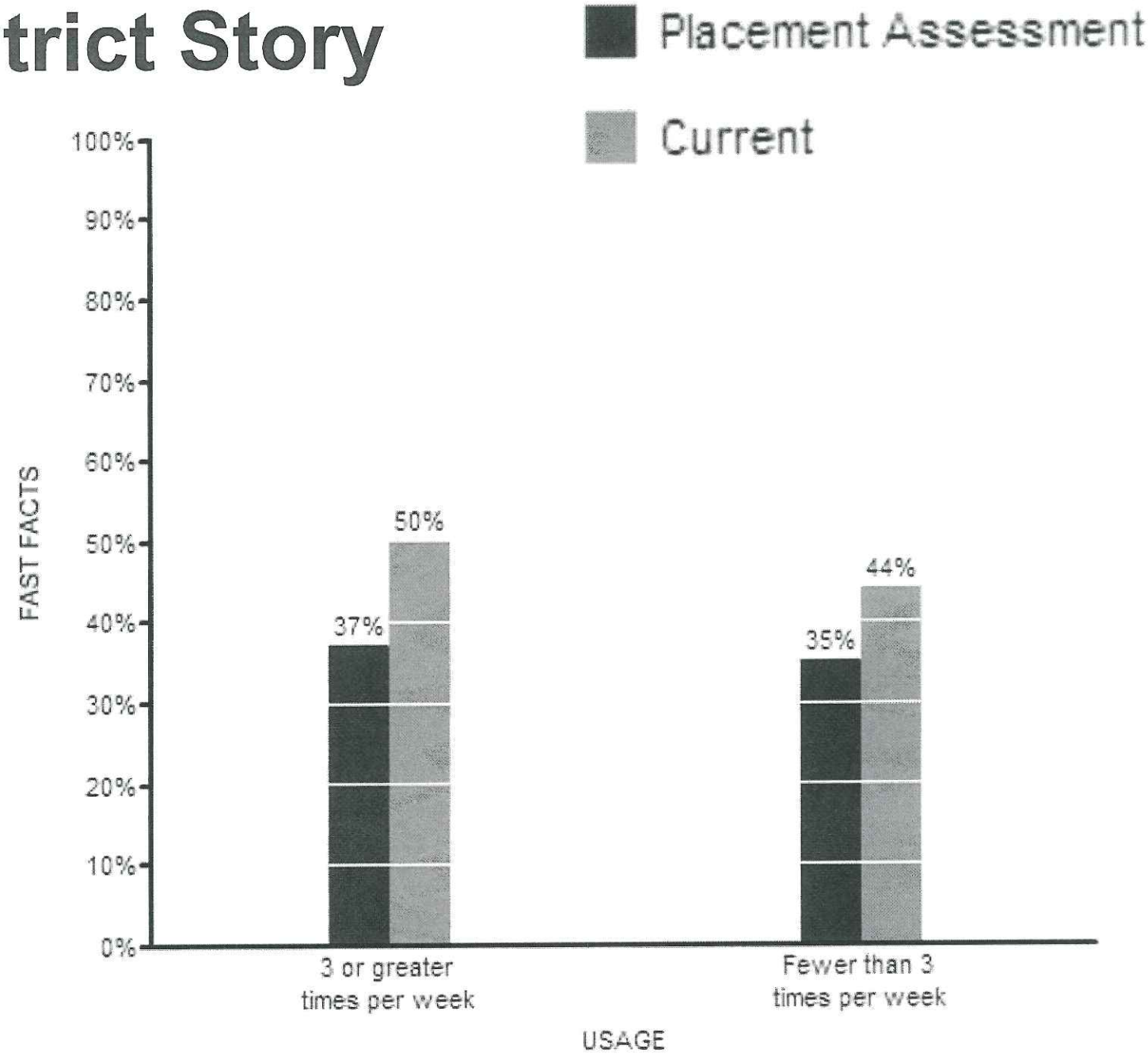
Apply Demographic Filter: Off

All Operations

FASTT MATH AVERAGE USE	NUMBER OF STUDENTS
3 or greater times per week (recommended use)	568 (29%)
Fewer than 3 times per week	1383 (71%)
TOTAL	1951 (100%)

Number of Students Who Completed Operation: 140

District Story



Student Response to Intervention Report

- 3 different students
- 3 different stories

On average, how many times per week did each student use FASTT Math?

Make a connection between the number of FAST FACTS learned and the usage.

How is the story of student C different from the others.

Appendix G.

Math Gap Analysis Survey

17 January 2014 at SAU
facilitators: Diane Lurvey (klurvey@sceresc.net)and Kathy Scoglund (kscoglund@sceresc.net)
Focused monitoring Achievement/Leadership Team Combined meeting
Running Notes

Reviewed Agenda for the day and made adjustments

"In the factory model of schooling, quality was the variable; time was the constant..." Robert Cole & Philip Schlechty

- Discussion about Hattinwork and relation to schedule
- IEP process still tied to time units
- At high school we are assuming that students need more time to master algebra
- District is looking at how to fit more into the schedule
- At high school students are given time for re teaching and retesting to improve quality

Housekeeping

- Reviewed PCI sheets
  - Narrowing and defining focus
  - Different levels of math experts in district
  - Many seem to be in agreement about what needs to happen
- Talking points at the building level
  - Difficult as most did not meet with staff
  - Hopefully have something more specific to share with staff that will warrant feedback
- Goals for the day
  - Provide a FM road Map
  - Review best practices for improving student performance
  - Continue to refine FM focus areas
  - Introduce short cycle PDSA process (math)
  - Consider formation of FM subcommittees
- Set norms of collaboration and roles
  - Put ideas on the table
  - Use data to support ideas

Bob Belmont: initial implications and impressions regarding current on-site IEP reviews

- Outlined process
- 8 files selected for review at each school
- 92 points of compliance
- 6 visitors reviewed files at each school
- We will wait for final report which will give us reason to celebrate and direct us to compliance concerns where we need to adjust are practices
- Discussion of DOE concerns regarding CSD Written Prior Notice
- Discussion of various points and comments made by DOE

The FM Road Map

- Where have we been?

    - We defined where the gap is and how we will assess progress in narrowing said gap
- Where are we now?
    - Defining and refining objectives for an action plan to narrow gap
    - We are planning to write the plan
- Where are we going?
    - Finalization and implementation of plan
    - Monitoring of implementation of plan
    - Monitoring of impact of plan on student achievement

Key Data and Resources

Quick review

- 6 articles
- 4 A's Protocol Synthesis
- Hattie's Top Ten
- New Hattie Article - Visible Learning for teachers
- Dylan William video on Feedback and Formative Assessment
    - http://www.youtube.com/watch?v=n4vA2quoYio
    - Pair/share regarding Hattie's influences on student learning, 6 articles, and William video

Museum Walk of CSD Preliminary Objectives for Action Planning: Narrowing the gap in math

- All walked and commented in writing on 5 objectives
- Group divided into five teams, each team wordsmiths goal using written feedback, goals can be combined with other(s) via collaboration with other teams, or, if necessary, goal can be eliminated altogether
- Goal: established 1-3 goals that are clear and ready to drive action plan

lunch

Review of objectives work after lunch:

- #1 C Rath - merge together initiatives #1 and #4, cannot provide feedback unless know what you are giving feedback upon, much more focused!... next iteration will involve feedback.
- #2 B Belmont N Pender- specialist.. ideally in each building.. mirror reading on many levels - teachers, paras, PD.. part of PD, collaboratives... Comprehensive SUCCESSFUL math interventions, can we rethinking reading specialists and allocations, adjust hours (not net) but when implemented.. how promise # of hours.. RETHINK models?! Note how long it has taken to get reading teachers not identified with serving the most needy students... not easy.
- #3 S Dicroce, A Wilkinson, M Speckman.... classroom management not a stand alone.. not driver of math performance.. PBIS and Responsive Classroom.. should not be focus. It is important regardless.
- #5 B Hemingway, Christina... concentrating on kids with IEPs.. WHAT HAPPENS DURING MATH BLOCK??? Flexible grouping.. small group instruction in classroom or break-out room, why is schedule the way it is, same time every day (ugh), no one

wants to tackle the schedule. Where is math ALL taught at same time... hard for specialists.. vision of grouping!? FLUID! Flexible! Tasks NOT done during "kid" time. VALUING the schedule.

- #4.. No report.. merge with #1

Do practice PLC .. role play with data...
Work in groups.. get it on paper. Reorg groups.

Report out at end:

#5: Maximize students schedules to include all personnel and resources (tech) in order to provide a math block that allows for effective instructional strategies and practices such as:

- mini lessons
- Flexible small groupings (using form assessment)
- additional guided practice
- interventions
- feedback between teachers/students
- multiple opportunities to demonstrate competencies

#1 and #4: Utilizing continuous cycle of task based feedback between students, teachers, and parents, all can communicate specific learning pathways. Students and teachers will set focused learning objectives based on where students are on the learning pathway.

- Gr 3-5
- OGAP Learning Progression
- all schools

#3: To provide comprehensive math interventions that focus on learning strategies, reteaching, practice and enrichment ultimately resulting in student success.

- Math specialists - train, reg ed, SPED, paras, co-teaching model, data, small group, interventions, facilitate collaboratives
- PLCs/Collaboratives about math w/ classroom teachers, interventionists, EAs, math specialists

TAKEAWAY: Share roadmap document

New Hampshire Focused Monitoring and School Improvement
Concord School District
Achievement Team
Friday March 21, 2014
8:00 am-2:45 pm

Outcomes for Today's Meeting:

- Refine FM focus areas: concrete objectives with measurability and specificity
- Provide Math curriculum updates
- Hear presentation on Formative Assessment and Feedback
- Form of FM subcommittees
- Begin to develop goal for Action Plan and method of measurement

8:00 Welcome and Housekeeping

- Norms and Roles
- January 17 PCI's
- Update on Math: "big picture" (Chris Rath)

8:30 Continued Action Planning: GOAL development

- Method of measurement
- Baseline
- Target
- Timeframe

9:15 Presentation: Formative Assessment and Feedback (Dr. Robert Greenleaf)

11:15 BREAK

11:30 Objectives "Reprise"

- "Wordsmithing" and swap
- Report out
- Subcommittee formation

12:15 LUNCH

1:00 Math Update (Linda, Carol, Sandy, John, Chris D.)

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1:00 Math Update (Linda, Carol, Sandy, John, Chris D.)

Concord School District – Achievement Team Meeting

Focused Monitoring Process - Investigate Factors Impacting Student Achievement - 3-22-14

Part I: Welcome

Welcome and PCI Feedback 2013-2014 FM Process

"In the factory model of schooling, quality was the variable; time was the constant. Students were given a set amount of work to do in a set period of time, then graded on the quality of what was accomplished. We held time constant, and allowed quality to vary. We must turn that on it's head: Hold the quality of the work constant and allow time to vary. We must realize we have the power to achieve a common curriculum by uncommon means ."

Robert Cole & Phillip Schlechty

" Housekeeping"

- Review of January AT meeting
- PCI review
- Review of Math- "Big Picture"

Essential Question

What are the contributing factors to the achievement gap between students with disabilities and their non-disabled peers, and how will this gap be narrowed?

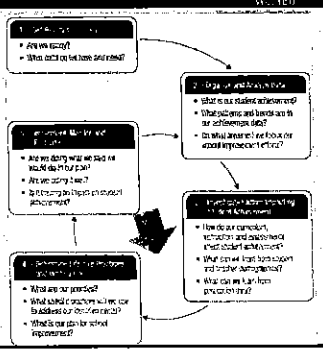
FM Process Goals for the Year

- Align the FM Process with the work of the Concord School District to leverage the greatest benefit.
- Determine the root causes of the achievement gaps between students with disabilities and their non-disabled peers.
- Develop a Plan of Action to improve results for all students, but particularly for students with disabilities.

Goals for the Day

- Refine FM focus areas: concrete objectives with measurability and specificity
- Provide Math curriculum updates
- Hear presentation on Formative Assessment and Feedback
- Form Subcommittees
- Begin to develop Goal for FM Action Plan and design method of measurement

Cycle of Inquiry in the Schoolwide Improvement Process



Part II: Team Norms & Roles

7 Norms of Collaboration

- 1. Pausing
- 2. Paraphrasing
- 3. Posing questions
- 4. Putting ideas on the table
- 5. Providing data
- 6. Paying attention to self and others
- 7. Presuming Positive Intentions

- Wellman and Lipton

Achievement Team Roles...

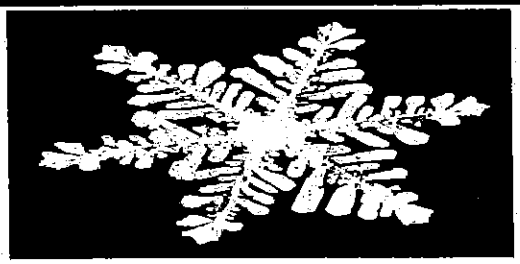
- Note Taker
- Time Keeper
- Process Observer
- Scribe
- Jargon Buster
- Historian (Year-long role)

Action Plan- Goal Development

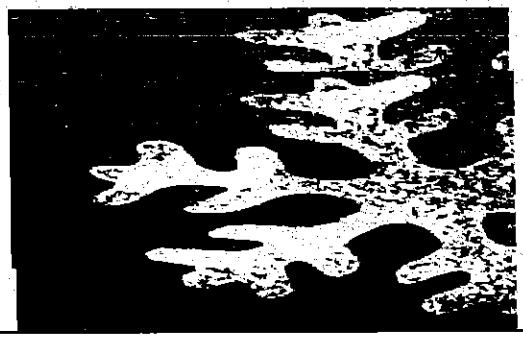
- Goal is focused, singular and specific
- Method of Measurement
- Baseline
- Target
- Timeline

Presentation: Formative Assessment and Feedback

BREAK



Part III – Refinement Activity



Refining for Measurability and Specificity

- Review objectives
- Return to original small groups
- Swap objectives for possible revisions
- Chart paper "Read Outs"
- Scribe responses
- Create subcommittees/ one per objective

LUNCH

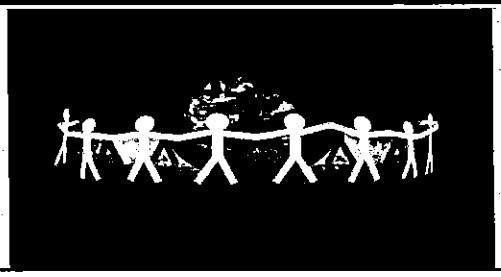
Presentation: Math Updates

- OGAP
- Algebra "Double Team"
- IEP Training up-date

Continue Action Planning

- By subcommittee:
  Objectives expansion

Meeting Close



Wrap - Up

- PCI evaluation
- Action Items: Talking Points/ vetting the objectives, continue subcommittee work
- Process Observer
- PSU Graduate Course
- Meetings/observations: Beaver Meadow; Linda et al: PDSA
- Meeting Dates-Next meeting: April 11 ,2014

Plan for Communication

- Key **Talking Points:** Share draft objectives with the Concord School Community .
- Who's Responsible for Communicating the Objectives?
- Who Needs to Know?
- By When?
- Record feedback and bring to next meeting.

Wrap-up and Thank-you

"Greatness is not a function of circumstance. Greatness, it turns out, is largely a matter of conscious choice, and discipline." —
Jim Collins, *Good to Great: Why Some Companies Make the Leap...And Others Don't*

OGAP Multiplicative Framework

(Draft January 2013)

Depending upon the strength of multiplicative reasoning students may move back and forth between using multiplicative, transitional, additive, and non-multiplicative strategies as they interact with different problem structures and problem situations. (Kouba & Franklin, 1995; VMP OGAP, 2006)

PROBLEM CONTEXTS

Application/Context
- Equal groups
- Equal measures
- Measure conversions
- Multiplicative comparison
- Patterns
- Rate
- Rectangular area
- Volume

Concept/Property
- Equations
- Properties

PROBLEM STRUCTURES

Types of Items
- Application/context
- Concept/property

Multiplicative Representations
- Equal groups
- Arrays
- Area
- Open area
- Linear

Number of Factors
- Two factors
- More than two factors

Complexity of Numbers

Factors
- Single digit
- Multiple digit
- Powers of ten
- Fractions/decimals

Divisors
- Single digit
- Multiple digit
- Powers of ten
- Fractions/decimals

Understanding and Use of Properties
- Associative
- Commutative
- Distributive
- Equality
- Identity
- Multiplicative Inverse

Understanding and Use of Relationships
- Addition - Multiplication
- Doubling and Halving
- Model - Equation
- Model - Model
- Multiples and Factors
- Meanings of remainders
- Context - Equation
- Context - Model
- Powers of ten

Types of Division
- Partitive
- Quotative

Language
- Natural (e.g., every)
- Mathematical (e.g., per)

Problem Situations

Refers to known and unknown information in a problem.
For example, in equal group problems there might be an unknown product, or an unknown number of equal groups, or an unknown quantity in a group.
See page 4 for some examples. Also see the CCSSM page 89.

ABOUT OGAP FRAMEWORKS

OGAP Frameworks are based on mathematics education research on how students learn specific mathematics concepts, errors students make, and pre-conceptions or misconceptions that may interfere with learning new concepts or solving related problems. OGAP references are found at http://www.margepetit.com/petit_pdfs/OGAPReferences3.pdf.

There are three major elements to an OGAP Framework that should be considered when analyzing student work or making instructional decisions:
1) problem contexts
2) problem structures
3) evidence in student work

This page identifies problem situations and problem structures for multiplication and division problems. Pages 2 and 3 are tools to help teachers classify evidence in student work, including classroom discussions, and make instructional decisions. Page 4 has samples of different problem contexts and situations.

For students to become strong multiplicative reasoners they must interact with a range of problem situations and problem structures. The CCSSM specifically identifies problem contexts at targeted grades on a progression from equal groups and measures, and area situations at grades 2 and 3 to measurement conversions, area, volume, multiplicative patterns, and multiplicative comparison problem situations at grades 4 and 5. This progression, among other things, is designed to prepare students to engage in proportional situations using multiplicative reasoning.

Consistent with the CCSSM the OGAP Frameworks on pages 2 and 3 show a progression from the link between repeated addition and multiplication in an equal groups model to the development of efficient and generalizable multiplicative strategies through the open area model, and understanding of place value, properties of operations, and relationships.

As students interact with new concepts, new problem situations, new structures, and more complex problem solving situations they may move back and forth between multiplicative, transitional, additive, and non-multiplicative strategies. This is important evidence to use for instructional decision making. For example, a student may consistently solve equal group problems using a Multiplicative Strategy regardless of the complexity of the numbers, but you may find that the same student adds factors (Non-Multiplicative Strategy) when solving multiplicative change problems.

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OGAP Multiplicative Reasoning Framework - Multiplication (Draft January 2013)

Multiplicative Strategies

Algorithms

Partial Products

```
   16
 X 42
 ----
   12
   20
  240
  400
 ----
  672
```

Traditional

```
  21
   16
 X 42
 ----
   32
  640
 ----
  672
```

Distributive Property

16 x 4 = 4 (10 + 6) = 4(10) + 4(6) = 40 + 24 = 64

Associative Property

(8 x 2) x 5 = 8 (2 x 5) = 8 x 10 = 80

Commutative Property

16 x 4 = 4 x 16

Doubling and Halving

16 x 4 = 8 x 8 = 64

Known or Derived Fact

6 x4 = 24

Powers of Ten

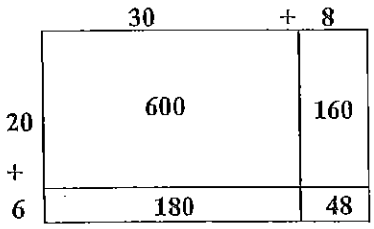
5 x 400 = 5 x 4 x 10 x 10

Transitional Multiplicative Strategies

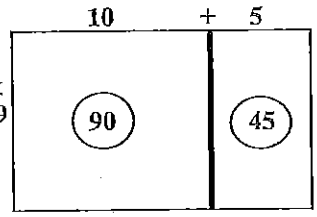
Transitional

Open Area Model — *Considers both dimensions of the array and area model.*

26 x 38 = 988

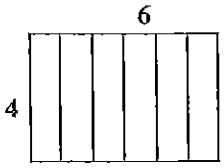


15 x 9 = 135



Area Model

6 x 4 = 24



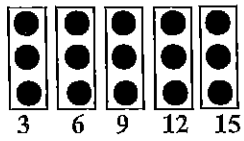
Considers BOTH dimensions of an area model moving away from needing to see every square unit.

Early Transitional

Skip Counting

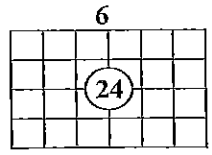
3, 6, 9, 12, 15

Equal groups in an array



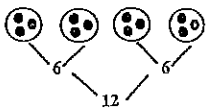
Only considers one dimension of an array or area model.

Area Model 6 x 4 = 24



Considers BOTH dimensions of an array or area model.

Building up



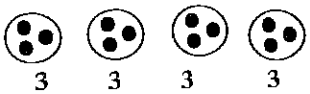
3 + 3 + 3 + 3
6 + 6
12

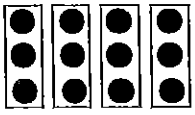
Additive Strategies

Additive

Repeated addition with or without a model — *3 x 4 = 12*

3 + 3 + 3 + 3 = 12





3 + 3 + 3 + 3

Subitizing in small groups

Early

Modeling - Counting by ones

Modeling - Counting by sub groups 3 x 5 = 15

Applies Understanding of Place Value, Properties, and Relationships

Unitizes into groups and sub-groups

Depending upon the strength of multiplicative reasoning students may move back and forth between multiplicative, transitional, additive, and non-multiplicative strategies as they interact with different

Non-Multiplicative Strategies

- Adds or subtracts factors
- Models factors incorrectly
- Uses incorrect operation
- Not enough information
- Guesses

Underlying Issues/Errors

- Misinterprets the remainders
- Does not consider the reasonableness of
- Units inconsistent or missing
- Calculation error
- Place value error
- Vocabulary error
- Property or relationship error
- Equation error

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OGAP Multiplicative Reasoning Framework - Division (Draft January 2013)

Multiplicative Strategies

Algorithms

Partial Quotients

```
17 | 585 |
    340 | x 20
    245 |
    170 | x 10
     75 |
     68 | x 4
      7 | 34 r 7
```

```
      4
     10
     20  34 r 7
17 | 585 |
    340 |
    245 |
    170 |
     75 |
     68 |
      7 |
```

Traditional

```
      34 r 7
17 | 585
     51↓
      75
      68
       7
```

Distributive Property

35 ÷ 7 = (21 ÷ 14) ÷ 7 = 3 ÷ 2 = 5

Treats the remainder appropriately given problem situation

Inverse relationship between multiplication and division

35 ÷ 7 = 5 7 x ? = 35

Known or Derived Fact

21 ÷ 7 = 3

Transitional Multiplicative Strategies

Transitional

Inefficient partial quotients

```
61 | 756 |      12 R 24
    183 | x3
    573 |
    183 | x3
    390 |
    183 | x3
    207 | x3
    183 |
     24 |
```

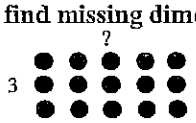
Trial and error to find a quotient

```
61 | 756
     732
      24
      12 R 24
```

2 x 61 = 122
20 x 61 = 1220
4 x 61 = 244
8 x 61 = 488
15 x 61 = 915
10 x 61 = 610
12 x 61 = 732

Early Transitional

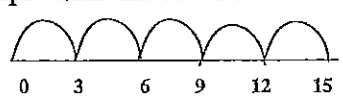
Models in an array to find missing dimensions



15 ÷ 3 = ? 3 x ? = 15

Skip Counts to find the number of "skips" with and without a model

15 ÷ 3 = 5
3, 6, 9, 12, 15 (5 skips)



Additive Strategies

Additive

Repeated subtraction or adding up to

```
61 | 350      5 r 45
     61
    289
     61
    228
     61
    167
     61
    106
     61
     45
```

```
  61
 +61
 122
 +61
 183
 +61
 244
 +61
 305
 +61
 366
```

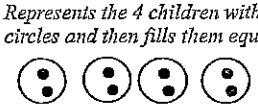
```
350
-305
 r 45
```

Sharing out in equal groups as repeated subtracted or addition

There are 8 cookies to share equally with 4 children. How many cookies does each child get?

8 cookies ÷ 4 children =2 cookies per child

Represents the 4 children with circles and then fills them equally



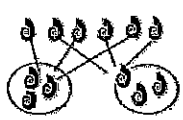
Twenty-four cookies were put into bags of 4 cookies each. How many bags were filled?

24 cookies ÷ 4 cookies per bag = 6 bags

Pulls out 4 cookies at a time until 24 cookies are used.

Early

Sharing out by ones



Sharing out randomly by subsets

Sharing 4, then 2, then 5 and so on

Applies Understanding of Place Value, Properties, and Relationships

Unitizes into groups and sub-groups

Depending upon the strength of multiplicative reasoning students may move back and forth between multiplicative, transitional, additive, and non-multiplicative strategies as they interact with different problem situations and problem structures. (Kaehr & Franklin, 1995; IMAP OGAP 2006)

Non-Multiplicative Strategies

Adds or subtracts dividends/divisors
Models problem incorrectly
Uses incorrect operation
Not enough information
Guesses

Underlying Issues/Errors

Misinterprets the remainders
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OGAP Sample Problem Contexts and Situations (Draft January 2013)

Important:
The sample problem contexts and situations do not include the full range of each problem situation or context.

Multiplication Examples	Division Examples How many in each group?(partitive) How many groups? (quotative)
Equal group, measurement conversion, equal measure, and rate problems involve applying a rate. number of groups/measurements/quantities x rate = total number Multiplicative comparison and multiplicative patterns involve a multiplicative scale factor. original x scale factor/multiplier = result Area and volume problems involve using dimensions in either an area or volume situation. *Problem situations are identified with an * and are in italics in the examples below.*	
Equal Group **Unknown product (total number of crayons)* Mark bought 12 boxes of crayons. Each box contained 8 crayons. How many crayons were there all together? 12 boxes x 8 crayons per box = ? crayons	** Unknown number in each group (crayons per box)* Mark had a box of 64 crayons. He shared the crayons equally with 4 people. How many crayons did each person get? (partitive) 64 crayons = 4 people x ? crayons per box
Equal Measures ** Unknown product(total length in inches)* It takes 14 inches of ribbon to make one bow. How many inches of ribbon will it take to make 7 bows? 7 bows x 14 inches per bow = ? inches	** Unknown number of groups (number of designs)* Sam ha s 15 yards of material. He is making a design that needs 3 yards per design. How many designs can Sam make? (quotative) 15 yards ÷ 3 yards per design = ? designs
Measurement Conversion **Unknown product (length in inches)* Tammy is 5 feet tall. How many inches tall is Tammy? 5 feet x 12 inches/foot = ? inches	
Rates **Unknown product (total dollars)* Sam works at the grocery store. He is paid $7.00 per hour. He worked 22 hours last week. How much money did Sam earn last week? 22 hours x $7.00/hour = ? dollars	** Unknown rate (dollars per hour)* Sam earned $154.00 last week. He worked 22 hours. How much did Sam earn per hour? (partitive) $154.00 = 22 hours x ? dollars per hour
Multiplicative Comparison ** Larger unknown (height in inches)* The students in Mrs. Gilbert's class planted bean and corn seeds. The bean plants grow 3 times faster than the corn plants. When the corn plants measure 2 inches, how tall will the bean plants be? 2 inches x 3 = ? height of bean plants	** Multiplier unknown (scale factor unknown)* Bill's garden is 240 square feet. Leslie's garden is 20 square feet. How many times greater is Bill's garden than Leslie's garden? (quotative) 240 square feet ÷ 20 square feet = ? times bigger
Patterns ** Larger unknown (length)* A 5-inch piece of elastic is stretched 3 times its length. How long is the elastic after it is stretched? (4 times, 5 times, *n* times) 5 inches x 3 = ? (total length)	
Area ** Unknown product (area in square feet)* Linda's kitchen floor measures 12 feet by 7 feet. How many tiles (1 square foot) are needed to cover the floor? 12 feet x 7 feet = ? (total area in square feet)	** Unknown factor (length of kitchen floor)* Linda's kitchen floor is 150 square feet. The length of one dimension is 10 feet. What is the length of the other dimension of the kitchen floor? 150 square feet ÷ 10 feet = ? (length of other dimension in feet)
Volume ** Unknown volume (volume of water the tank can hold* The dimensions of a fish tank are 10 inches x 12 inches by 18 inches. If you filled the tank to the top, how much water would be in the tank? 10 inches x 12 inches x 18 inches = ? amount of water in tank	** Unknown factor (height of container)* A rectangular container holds 250 cubic inches of liquid. the base of the container is 10 inches and the depth 5 inches. What is the height of the container? 10 inches x 5 inches x ? inches = 250 cubic inches
OGAP Equation Example: 6 x 5 = 30 Write a story problem that goes with this equation. OR match a story problem to an equation.	**OGAP Property Example:** Ann knows the answer to 9 x 5. Explain how can she use this information to solve 45 ÷ 9?

This is a derivative product of the Vermont Mathematics Partnership Ongoing Assessment Project (OGAP) which was funded by NSF (EHR-0227057) and the US DOE (S366A020002). © 2012 Marge Petit Consulting, MPC, E. Hulbert, R. Laird

P6

The table below shows the number of pencils Mary gave to the students in her class.

People in Mary's Class	1	2	3	4	5	14
Total Number of pencils given	7	14	21	28	35	**?**

Write a rule that Mary could use to figure out how many pencils she gave to the 14 students in her class.

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E16

Tom put 8 flowers in each vase. He had 32 flowers altogether. How many vases does he have?

Choose the number sentence that can be used to find out how many flowers are in each vase.

a) 8 ÷ 32

b) 32 x 8

c) 8 + 32

d) 32 ÷ 8

Explain your choice.

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Listing of "Objectives" from CSD Achievement Team- January 17,2014

1. (#5) Maximize students' schedules to include all personnel and resources (tech) in order to provide a math block that allows for effective instructional strategies and practices such as:

* mini lessons
* Flexible small groups (using formative assessment)
* additional guided practice
* interventions
* feedback between teachers/students
* multiple opportunities to demonstrate competencies

2. (#1 and #4) Utilizing continuous cycle of task-based feedback between students, teachers, and parents, all can communicate specific learning pathways. Students and teachers will set focused learning objectives based on where students are on the learning pathway.

*Gr 3-5
* OGAP Learning Progression
* All schools

3. To provide comprehensive math interventions that focus on learning strategies, re-teaching, practice and enrichment ultimately resulting in student success.

*Math specialists-train, regular ed, special ed, paras, co-teaching model, data, small group, interventions, facilitate collaboratives

* PLCs/ Collaboratives about math w/classroom teacher, interventionists, EAs, math specialists

Concord Achievement Team Revised Objectives
March 25, 2014

1. Develop schedules that include a "Math Block" and a focus on the delivery of effective tiered instructional strategies and practices.

2. Utilize a continuous cycle of formative assessment and "high effect" feedback to enable students to understand how they are progressing toward their learning goal.

3. Establish math (PLCs) data teams at each grade level to assist in the delivery of comprehensive, tiered math interventions (including flexible grouping) to review student work, to administer on going formative assessment for the purpose of informing instruction and documenting growth in student learning.

Appendix H.

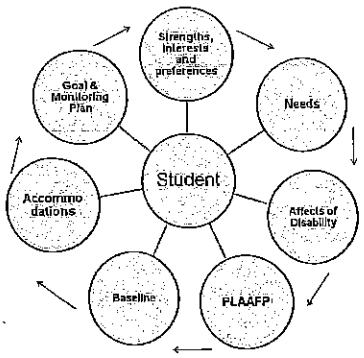
Writing IEPs with Measurable Goals Workshop
Presenter: Carol Kosnitsky

Writing Instructionally Relevant and Measurable IEPs

Concord School District
2014

Carol Kosnitsky
ckosnitsky@comcast.net

Connect the Dots



Connecting the Dots

Student Characteristic	Present Level of Performance	Instructional/ Environmental Demand	How Disability Affects...	Accommodation	Goal
Strength: auditory comprehension Need: improve decoding	Can decode single syllable words; reads 50 words correct on 3rd grade passage	Read 5th grade level text; Answer questions for homework	Difficulty making meaning from text	Digital textbook when reading grade level text (for any purpose other than spec. reading instruction	Improve decoding skills and sight vocabulary to read at beginning 4th grade level.
Strength: Curiosity Need: Limited sustained attention	Can remain on task for 5 minutes.	Teacher provides lecture on introduction to new science unit (@ 30 minutes).	Student misses critical information; distracts other students.	Provide frequent cues (from verbal to visual)	Sustain attention for longer periods through explicit instruction on self-monitoring skills

Multiple Sources of Information

The foundation of a strong IEP is built upon multiple sources of reliable and objective information.

Multiple Sources of Information

These sources include:

- Student input
- Parent input
- Teacher input
- Observations
- Formal and Informal assessments

Multiple Sources of Information

Interviews/Questionnaires

- Student
- Parent
- Teacher

Multiple Sources of Information

Coordination w/ Related Service Providers

- What are the overlapping skills to be addressed?
- How is the disability affecting the student's functional performance?
- Are there opportunities to align goals between related service providers and special educators?

Multiple Sources of Information

Formal and Informal Assessments

✓ Analysis of scores; not scores in isolation
✓ Error analysis

Sources

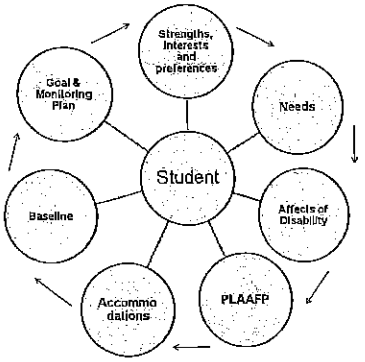
- Initial & 3 year re-evaluations
- AIMSweb
- F & P
- NECAP
- OGAP (?)
- IEP Goal Progress Monitoring Data
- POMS

Multiple Sources of Information

Current classroom observations

- Behavioral data (baseline)
- Functional performance
- Environmental supports and barriers
- Social relationships
- Adherence with school routines

Connect the Dots



Tell the Right Story

Present Levels of Academic Achievement and Functional Performance

Information on this page will form the basis for the goals, objectives, and services for the student's IEP.

1. Describe the Student's Strengths:

2. Describe the Student's
Academic Needs:
Developmental Needs:
Functional needs:

3. Describe the Parent Concerns for Improving Student's Education:

4. Additional information about the student to be considered including most recent evaluations:

5. Describe how the student's disability affects the student's involvement and progress in the general curriculum;

6. Describe how the student's disability affects non-academic areas:

7. For preschool students, as appropriate, describe how the disability affects the student's participation in age appropriate activities:

Page 2:
Strengths, Interests & Preferences

Carol Kosnitsky

Strengths of the Student

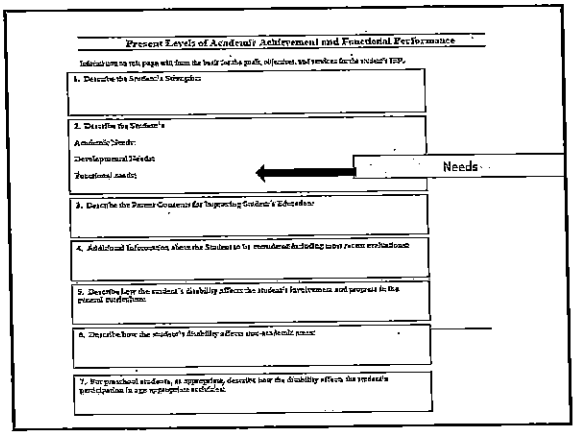
Identify the **student's strengths, interests and preferences.**

- Describe **how strength, interests and/or preferences can support the student's participation in school.**
  - Strengths support increased access
  - Interests and preferences support increased choice and engagement

Example

Juan is beginning the 5th grade. He has a specific learning disability in basic reading skills.

Juan has strong auditory comprehension skills – provide auditory supports while reading new literary or information text. He works effectively with peers in small work groups and is open to reading in pairs and small groups. Juan is also very athletic and participates in sports in and out of school. Using sports analogies and metaphors peek his interest and curiosity.



Present Levels of Academic Achievement and Functional Performance

Information on this page will form the basis for the goals, objectives, and services for the student's IEP.

1. Describe the Student's Strengths:

2. Describe the Student's
Academic Needs:
Developmental Needs:
Functional Needs:

Needs

3. Describe the Parent Concerns for Improving Student's Education:

4. Additional Information about the Student to be considered including most recent evaluations:

5. Describe how the student's disability affects the student's involvement and progress in the general curriculum:

6. Describe how the student's disability affects non-academic areas:

7. For preschool students, as appropriate, describe how the disability affects the student's participation in age appropriate activities:

Needs

- Describe needs that will be addressed through specially designed instruction, related services and/or accommodations
- Within each domain, describe the most urgent needs to be addressed in the upcoming year (e.g., direct instruction in place value; explicit instruction in summarizing and inferring). **Prioritize needs in order to focus the IEP on areas most essential to student progress in the general education curriculum.**
- Do not describe services/location in this section.

Needs

- **Academic** – describe academic areas that are affected by student's disability (reading, writing, math, science, etc.). Some disabilities may "indirectly" affect academics, such as time on task, compliance, etc.
- **Developmental** - describe student's current developmental milestones, as compared to same aged peers (motor, communication, social, etc.)
- **Functional** – describe how student applies the skills and knowledge in everyday life (organization, attention, habits of mind, relationships, etc.)

Example

Juan needs to improve basic reading skills:

- Master decode all letter patterns
- Increase sight vocabulary
- Develop effective use of context clues

Juan needs auditory supports to ensure he comprehends material when reading above his independent level.

Present Levels of Academic Achievement and Functional Performance

Information on this page will form the basis for the goals, objectives, and services for the student's IEP.

1. Describe the Student's Strengths

2. Describe the Student's
Academic Needs;
Developmental Needs;
Functional needs)

3. Describe the Parent Concerns for Improving Student's Education

4. Additional information about the Student to be considered including most recent eval

5. Describe how the student's disability affects the student's involvement and progress in the general curriculum

6. Describe how the student's disability affects non-academic areas

7. For preschool students, as appropriate, describe how the disability affects the student's participation in age appropriate activities

How Disability Affects
Connection between the disability and the curriculum (academic and functional)

How Student's Disability Affects Involvement & Progress in the Curriculum

- Provide statements that directly demonstrate the correlation between disability and participation/curriculum.
- Describe what scaffolding will be necessary for the student to participate and progress in the curricular areas.
  - Due to weaknesses in _____ the student has difficulty with _____. Providing supports in _____ will allow the student to independently _____.

Example

Weaknesses in phonemic awareness and phonics affect Juan's ability to efficiently decode much of the vocabulary he will encounter in grade level text. He is still learning that letters are symbols of sounds and there are rules that can be used to determine the word. The effort he needs to decode unfamiliar words reduces his ability to comprehend the meaning of the text. Asking Juan to independently read for the purpose of gaining new knowledge at this frustration level is a barrier to him having meaningful interaction with the material. Given stronger auditory comprehension skills, Juan should be provided access to books on tape and/or digital text that can provide auditory supports when being asked to read independently.

Area of Need: Reading, Math, etc.	Measurable Annual Goals and Benchmarks/Short-term Objectives/Progress Toward Meeting Annual Goal(s)

Area of Need:

Present Level of Academic Achievement:

Present Functional Performance:

Annual Measurable Goal:

Present Levels:
Information describing the skills and behaviors the student demonstrates and areas of need that will be addressed through specially designed instruction.

Benchmarks/Short-Term Objectives or Progress toward meeting the annual goal	Beginning Date

Measurable Method for Evaluation	Method of Reporting to Parent

Present Levels of Performance

1. Describe the skills/behaviors the student demonstrates (*Look at CCSS at level of skills currently demonstrated by the student*).

Gap Analysis

2. Describe the student's performance compared to expectations/skill in the general education curriculum (*Look at CCSS at the level of the student's grade placement*). **This is where alignment begins!**

3. Describe the skills the student needs to learn this year in order to narrow/close the gap (*needs and goal priorities*).

Present Levels of Performance

Gap Analysis

1. Compare and contrast the student's present levels and the grade level standard.
2. Determine the nature and dimension of the gap – Skills? Knowledge? Process?
3. Identify what can be adapted to "reduce the gap".
4. Determine if this adaptation alters the standard.
5. Determine the specially designed instruction necessary for the student to have meaningful engagement with the curriculum.
6. Describe motivators for the student.

Present Levels of Performance

Present Level = Baseline

- **Template for developing a baseline:**
  - Condition present
  - Student
  - Target skill or behavior
  - Performance Level

Example:

- Currently, given a 3rd grade level passage, Juan read 50 words correct with 80% accuracy in 1 minute.

Essential Questions to Collect Baseline

1. What student's skill/behavior is targeted to change?
2. What tool or methodology can quantify changes in this targeted skill/behavior?
3. Can the tool or methodology be repeated throughout the IEP cycle to determine if student is making progress?
4. At what level is the student currently performing the skill/behavior (present level/baseline)?

Essential Questions to Collect Baseline

- Determine what **skill or behavior** you want the student to **change** and what **dimension** of that skill or behavior needs to change. Dimensions of skill or behavior that can be changed include:
  - → Accuracy
  - → Speed
  - → Frequency
  - → Latency
  - → Duration

Annual Measureable Goals

Level of Skills/Behaviors

- **Acquisition** – Has the student learned the skill?
- **Fluency** – Has the student demonstrated the ability to do the skill?
- **Maintenance** – Can the student remember the skill and do it repeatedly?
- **Generalization** – Has the student maintained the skill to use it whenever/wherever?

Essential Questions to Collect Baseline

Instead of: (non example)	**Define it As:** (example)
• Comprehension	• Answer "w" questions.
• Writing	• Cite evidence in text.
• Expressive language	• Write complex sentences with adjectives and conjunctions.
• Social skills	• Join in cooperative play activities with peers.

Baseline

Template for Baseline

- Currently
- Under what conditions
- Student
- Does target skill/behavior
- How well (performance criteria)

Carol Kosnitsky

Baseline

- **Currently** – (data must be current).
- **Under what condition** -- the condition that must be present when the student is asked to demonstrate the targeted skill or behavior.
  For example:
  - Assessment level – Given 3rd grade passage...
  - Degree of support – Given graphic organize...
  - Setting/location – During hallway transitions...
- **Student**

Baseline

- **Does**-- specific, observable behavior or skill that requires some "action" or "change".
- **Performance Criteria**-- Describes the level at which the student currently performs the skill or behavior.

  For example:
  - From 2/10 items to 8/10 items on checklist
  - Within 20 minutes to within 5 minutes
  - From 20% accuracy to 80% accuracy

Example

Juan recognizes long and short vowels when reading regularly spelled one syllable words. He can decode regularly spelled two syllable words with long vowels and words with common prefixes and suffixes. He can recognize and read irregularly spelled words at the 2nd grade level. He is able to read 2nd grade level text with fluency and accuracy, currently reading 80 words correct with 95%. However, when given a 3rd grade level passages, he reads 50 words correct with 80 % accuracy. He is beginning to use context to confirm meaning and read with more expression.

By 5th grade, students are asked to decode multisyllabic words, use knowledge of letter-sound patterns correspondence, syllabication patterns and roots and suffixes to read multisyllabic words in and out of context. This year, Juan's specialized reading program will focus on decoding multisyllabic words, Latin suffixes and using context to assist in reading.

Juan's reading comprehension skills are affected by his current decoding skills. However, he is capable of comprehending all grade level material when presented with auditory supports.

Measurable Annual Goals and Benchmarks/Short-term Objectives/Progress Toward Meeting Annual Goal(s)

Area of Need: Implementation Personnel/Position Responsible:

Present Level of Academic Achievement:

Present Functional Performance:

Annual Measurable Goal: Projected Beginning Date:

Benchmarks/Short-Term Objectives or Progress toward meeting the annual goal	Beginning Date

Measurable Method for Evaluation	Method of Reporting

Measurable Goal:
What will student do by the end of the IEP cycle?

And how will it be measured?

Annual Measureable Goals

Relationship between the needs and annual goals

•For each need identified, there must be at least one annual goal and/or supplementary aid and service related to addressing that need.

Relationship between the PLAAFP and annual goals

•The PLAAFP provides the baseline data of where the student is at the beginning of the year. The IEP goals project where the student should be after implementing the special education services identified in the IEP.

Annual Measureable Goals

Core Concepts:

Goals must address the skills needed to enable the student to be involved and progress in the general education curriculum.

In developing IEP goals, the IEP team should answer the question: "what skills does the student require/need in order to master the content of the curriculum?," rather than "what curriculum content does the student need to master?"

Essential Questions to Develop Goal

1. What student's skill/behavior is targeted to change?
2. What tool or methodology can quantify changes in this targeted skill/behavior?
3. Can the tool or methodology be repeated throughout the IEP cycle to determine if student is making progress?
4. At what level is the student currently performing the skill/behavior (present level/baseline)?
5. **At what increased level should the student perform the skill/behavior in a year?**

Baseline

Annual Measureable Goals

Template for a Measurable Goal

- By when ...
- Under what conditions ...
- Student
- Will do (target skill or behavior) ...
- How well (level of performance)

Example

Reading Standard:

– Read with sufficient accuracy and fluency to support comprehension.

Goal:

– By June 2013, given a 3rd-grade-level reading passage, Juan will read 110 words correctly with 95% accuracy in 1 minute.

Measurable Annual Goals and Benchmarks/Short-term Objectives/Progress Toward Meeting Annual Goal(s)

Area of Need: Implementation Personnel/Position Responsible:

Present Level of Academic Achievement:

Present Functional Performance:

Annual Measurable Goal: Projected Beginning Date:

Benchmarks/Short-Term Objectives or Progress toward meeting the annual goal	Beginning Date

Measurable Method for Evaluation	Method of Measuring

Benchmarks/Objectives
How will the team know if student is progressing?

Objectives or Benchmarks

Objectives

- Discrete components of the skill student will demonstrate (task analysis).
- Mastery of a series of short-term objectives -- sequence of skills in an instructional hierarchy.

Objectives or Benchmarks

Example of Goal with Objectives

By June 2013, given verbal prompt, Sally will independently wash and dry her hands for 5 consecutive trials.

1. By September, Sally will independently dry her hands...
2. By October, Sally will independently rinse soapy hands...
3. By December, Sally will independently create lather in both hands...
4. By March, Sally will independently wet her hands...

Objectives or Benchmarks

Benchmarks

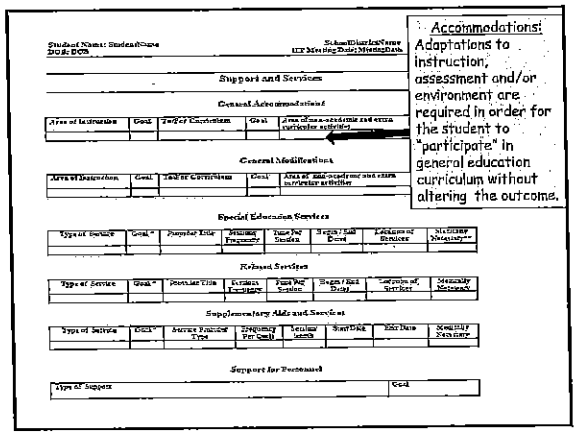
- Usually designate a target time period for a behavior to occur (i.e., the amount of progress the student is expected to make within a specified segment of the year).
- Establish expected performance levels that allow for regular checks of progress that generally coincide with reporting periods.

Objectives or Benchmarks

Example of Goal with Benchmarks

By June 2013, given a one minute 3rd-grade-level reading passage, Sally will read 98 words correctly on a weekly probe for 3 consecutive weeks administered by the special education teacher.

- By November 2012, given a one minute 3rd grade level reading passage, Sally will read 62 words correctly.
- By January 2013, given a one minute 3rd grade level reading passage, Sally will read 74 words correctly.
- By April 2013, given a one minute 3rd grade level reading passage, Sally will read 86 words correctly.
- By June 2013, given a one minute 3rd grade level reading passage, Sally will read 98 words correctly.



Accommodations: Adaptations to instruction, assessment and/or environment are required in order for the student to "participate" in general education curriculum without altering the outcome.

Accommodations

Accommodations - Essential questions

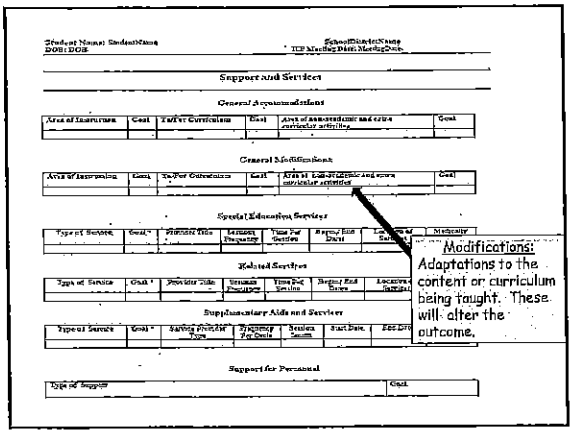
- What are the student's characteristics (related to student's disability)?
- What instructional and/or environmental demands that pose "barriers" to participation (expectations or practices within the teacher's control)?
- Can these demands be altered without changing the purpose of the standard?

Accommodations

- Convey specific information about the circumstances under which the accommodation should be used. For example – Instead of "preferential seating" include "Assign a seat in the last row so Sean may stand at his desk when he needs to move around".
- Discuss fade plans from the onset and review regularly. In addition, engage the student in this process from the beginning. Use the IEP as a vehicle to teach the student how to request accommodations (self-advocacy).

Accommodations

Student Characteristic	Present Level of Performance	Instructional/ Environmental Demand	How Disability Affects...	Accommodation	Goal Area
Strength: auditory comprehension **Need:** Improve decoding	Can decode single syllable words; reads 50 words correct on 3rd grade passage	Read 5th grade level text; Answer questions for homework	Difficulty making meaning from text	Digital textbook when reading grade level text (for any purpose other than spec. reading instruction	Improve decoding skills and sight vocabulary to read at beginning 4th grade level.
Strength: Curiosity **Need:** Limited sustained attention	Can remain on task for 5 minutes.	Teacher provides lecture on introduction to new science unit (@ 30 minutes).	Student misses critical information; distracts other students.	Provide frequent cues (from verbal to visual)	Sustain attention for longer periods through explicit instruction on self-monitoring skills



Modifications

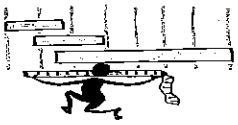
- Student is taught same curriculum, but less of it or at a different level of complexity; or
- Student is taught different or alternate curriculum.

Modifications

- What is the nature of the modification (same but different complexity; alternate standards?
- Who will make the modification (i.e. special educator, classroom teacher)?
- How will student be assessed and graded?
- By who?

Monitoring Student Progress

The IEP goal should identify a feasible and meaningful plan to **monitor the student's progress** (based on objective data).



Monitoring Student Progress

Progress monitoring is a systematic process for collecting data that is used to assess students' academic, social, and behavioral performance, and evaluate the effectiveness of the intervention.

Monitoring Student Progress

- Data should be collected on a regular basis (formative assessment).
- This data is reported on a quarterly basis to the parent and other team members (progress reports).
- The progress report should address the following:

  Has the student made sufficient progress to achieve the goal by the end of the IEP cycle?

Monitoring Student Progress

- **Quantitative data** – specific data based on the metric in the goal.
  - # of words read
  - minutes on task
  - % of correct answers
- **Qualitative data** - Other indicators that support progress - acquisition, fluency, maintenance and generalization across environments.
  - observation
  - teacher reports
  - other assessments

Thank You

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An example:

- Ellie is experiencing health related problems:
  - Weight
  - Blood pressure
  - Cholesterol
- Ellie's doctor develops an individual health program (IHP).
- The ultimate goal of the IHP is Ellie will be healthier. An intervention plan is reduce caloric intake and increase metabolic rate.
- An indicator of better health is appropriate weight level. Progress will be measured through weight lose.

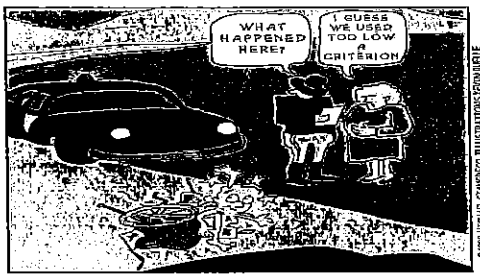
By June 2011, Ellie will decrease her weight from 150 lbs. to 130 lbs. – measured on a weekly basis.

Intervention
Ellie will do aerobics 3 x week.
Ellie will do strength training 2 x week.
Ellie will eat increased portions of fruits and vegetables.
Ellie will reduce the amount of sugar.

By June 2011, Ellie will decrease her weight from 150 lbs. to 130 lbs. – measured on a weekly basis.

Intervention	Benchmarks:
Ellie will do aerobics 3 x week.	By 1st quarter, Ellie will lose 5 pounds.
Ellie will do strength training 2 x week.	By 2nd quarter, Ellie will lose 10 pounds.
Ellie will eat increased portions of fruits and vegetables.	By 3rd quarter, Ellie will lose 15 pounds.
Ellie will reduce the amount of sugar.	By 4th quarter, Ellie will lose 20 pounds.

Strategy #4



MRS. WALKER LEARNS THE HARD WAY THAT SOMETIMES 80% CORRECT JUST ISN'T GOOD ENOUGH.

Example

Writing Standard:

- Write informative/explanatory texts to examine a topic and convey ideas and information clearly (Gr. 3-5).

Baseline:

- Given an assignment to write informative text, James scored 10 out of 24 on the attached Writing Informative Text Checklist (grade 5).

Goal:

- By June 2013, given an assignment to write informative text, James will score 20 out of 24 on the attached Writing Informative Text Checklist (grade 5). for 3 consecutive assignments.

Writing Informative Text Checklist

Points 1 - 3	Essential Elements	Qualitative Notes
	Introduce a topic - clearly provides a general observation and focus.	
	Group related information logically.	
	Include formatting (e.g., headings), illustrations, and multimedia when useful to aiding comprehension.	
	Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.	
	Link ideas within and across categories of information using words, phrases, and clauses (e.g., in contrast, especially).	
	Use precise language and domain-specific vocabulary to inform about or explain the topic.	
	Provide a concluding statement or section related to the information or explanation presented.	
	Total Points (Out of 27)	

Example

Standard:

- Use information gained from illustration and the words in a text to demonstrate understanding of the text (e.g. where, when, why and how key events occur.)

Baseline:

- Currently, after listening to an informational text passage, Tracy could not select a picture from a field of 3 options in response to "who" and "what" questions relating to the article.

Goal:

- By June, 2012, after listening to an informational text passage, Tracy will correctly select a picture from a field of 3 options in response to "who" and "what" questions relating to the article for 4 out of 5 consecutive opportunities.

IEPs for Students with Severe Disabilities

1. Identify instructional **priorities**.
2. **Self-determination:** How can the core curriculum be used to teach self-determination skills?
3. **Assistive technology:** How can the use of assistive technology enable the student to engage in the task more independently?
4. **Personal relevance and functionality:** How can real-life activities make the standard meaningful for the student?

Courtade, G., & Browder, D. M. (2011). *Aligning IEPs to the Common Core State Standards for Students with Moderate and Severe Disabilities.* Verona, WI: Attainment Company.

Carol Kosnitsky

Appendix I.

Resources:

Article: **Schools Moving Up**, Author Heather Mattson Almanzan
Article: **Bringing UDL into the Mainstream**, Author Alexander Russo
Article: **Up and Away**, Author Mike Schmoker
Article: **How Do Principals Really Improve Schools?** Author Rick DuFour & Mike Mattos
Article: **Growth Mindsets Transforming Students' Motivation to Learn**, by Carol Dweck
Powerpoint Presentation: Mega – Analysis Research, Dr. Robert Greenleaf
Hattie's **"Visible Learning" Meta-analyses**
Characteristics of Educator Instructional Disposition
Visible Learning: What's Good for the Goose Research, Author John Hattie
John Hattie's "Top 10" Definitions
Glossary of Hattie's Influences on Student Achievement, Author John Hattie 2012
MFA Achieving Student Growth Chapter 3 Critieria for Effective Feedback
Quality Feedback – What Is It and How to Give It, Author Katie Rapp
Embedded Formative Assessment, Author Dylan William
2013-2014 Concord Special Education Department Presentation PowerPoint

SCHOOLS MOVING UP*

By Heather Mattson Almanzán

Interviews with 18 schools that boosted student achievement reveal common principles driving their improvement.

When consultants at WestEd begin working with a low-performing school to help that school raise student achievement, staff members sometimes ask skeptically whether the research-based principles and strategies for school improvement that we present have worked in other schools. They want to know what these principles look like in action, in real school environments.

To answer that question, WestEd's Northern California Comprehensive Assistance Center conducted extensive interviews with administrators and teacher leaders from 18 schools in California and Nevada that have dramatically improved students' achievement—what we call "schools on the move." Some of these schools are profiled on the Web site SchoolsMovingUp, designed by WestEd to support educators working with low-performing schools (http://www.schoolsmovingup.net). All the schools we examined served high numbers of traditionally underserved students, but they varied in terms of grade levels included, size, and ethnic composition of the student body. We selected schools whose student test scores were low when their statewide testing first began but who made dramatic gains or who raised their test scores and consistently kept them high. Most important, the selected schools were not letting any group of students fall behind academically.

We brought no preconceived investigative framework to aid us in looking at these schools, wanting to learn the story of each individual school's reform effort. These schools were able to clearly articulate what they were doing to meet students' needs and had remarkably similar solutions to major challenges. The elements that led to their success—insisting on high expectations, using performance data to drive decision making, creating a focused plan, fostering interactive administrative leadership, embedding professional development in school culture, aligning curriculum to standards, and reaching out to parents—embody principles of school improvement identified in other research.

High Expectations: Beyond Pobrecito

A typical challenge for low-performing schools is overcoming the often ingrained belief that not all students will be able to master challenging academic standards. In the schools we studied, staff members infused high expectations into day-to-day practice inside and outside the classroom. Principals communicated the message that every

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student was expected to achieve to high standards. Teachers, administrators, and support staff worked together to identify interventions and resources to help any students who were having difficulty. Failure was not an option.

Many schools that were primarily nurturing environments found that they needed to become more academically challenging. For example, many staff members at Colin Powell Academy in Long Beach, California, believed that the students' outside lives were so difficult that they shouldn't be pushed hard in school. This is sometimes called the *pobrecito* or "poor baby" syndrome. Principal Denise Peterson told her staff that if they continued to think of their students in that way, they would never break the cycle of poverty or racism. Once teachers began to hold their students to high academic expectations (while still providing necessary support), student achievement improved remarkably and continued to improve every year.

Principals helped teachers see that although they can't affect a student's life outside school, they can control the teaching and learning that takes place within school. During a staff meeting at Horace Mann Elementary School in Glendale, California, soon after the school had been placed on an improvement list, principal Lynda Christian challenged all the teachers to look at the student names on their class lists and, if there was any child they were not capable of teaching to read, to let her know now. Christian made clear that she expected teachers to believe that all students can learn—and that she would commit to providing the support necessary. That staff meeting is remembered vividly by all, even years later.

Making Data Part of the Culture

These "schools on the move" used performance data and assessments continually to make instructional and programmatic decisions; using data in this way became an important part of school culture. Educators realized that to improve student achievement they needed more detailed and more frequent information than that provided through statewide assessments. Schools developed site-based assessments and drew data from multiple sources.

For instance, statewide assessments of students at Horace Mann showed that reading was students' weakest area. As staff members dug deeper into the data, they learned that students had strong decoding and fluency skills but were struggling with comprehension. A majority of Horace Mann's students are English language learners. To understand more about these students' comprehension, the teachers administered assessments appropriate to second-language learners—the Language Assessment Scales to monitor students' oral language skills and listening comprehension, and an English language proficiency checklist to get data on their English reading and writing skills—to get more clues about students' comprehension. Throughout each school year, teachers frequently assessed students' reading accuracy and comprehension, using the Developmental Reading Assessment (Pearson Learning), John's Basic Reading Inventory (Kendall Publishing), and the STAR Reading computerized assessment

(Renaissance Learning). Having multiple measures and understanding how to analyze those measures helped this school hone in on what its students needed.

In addition, Horace Mann trained its teachers to level books according to reading difficulty and to take frequent running records—a method of recording reading accuracy and errors as students read aloud—for each student to ensure that students chose books at their instructional level during small-group instruction.

A Focused Plan

For many schools under pressure to improve student achievement, setting priorities is a significant challenge. The awareness that there is so much to tackle often leads to taking on a lot of issues inadequately rather than identifying and solving a core issue. Through the process of analyzing data and identifying strengths and weaknesses, principals in these schools on the move identified a clear focus, which enabled the schools to write a school plan that they could truly use as a road map.

Martin Luther King Elementary School in El Centro, California, developed a five-year plan that spelled out steps the school would take to improve students' skills in reading, language arts, and mathematics. These steps included training teachers to use the Open Court Reading program, administering reading assessments every six weeks, and creating summer intervention programs for English language learners and traditionally underserved students students. The school used this five-year plan to guide all decisions regarding professional development, resource allocation, personnel recruitment, student placement, and program implementation. At leadership team and staff meetings, King principal Sherry Kolset-Gray modeled how to use the plan to make decisions. Kolset-Gray notes,

Because we have a very firm parameter and really clear goals of where we want to go, decisions are relatively easy. We ask, "Will this directly impact the performance of students who are not meeting grade-level standards in our focus area?", and if the answer is no, it doesn't happen.

Interactive Principal Leadership

Principals we interviewed knew that they needed to be visible instructional leaders. No matter how busy these principals were, they consistently observed in classrooms—not just for formal evaluations but also to monitor teaching and learning and to actively ensure that the objectives outlined in their school plans and the strategies discussed during professional development activities were being implemented. Some developed creative strategies for quickly observing and analyzing teacher practice. Ross Swearingen, principal at Brentwood Elementary School in Victorville, California, kept track of classroom visits on his handheld computer, making quick calculations of the number of students on task and checking that teachers were teaching appropriate standards and implementing appropriate strategies. One year, Swearingen completed 600 informal teacher observations.

Effective principals also made sure to interact with students and nurture relationships with them. They connected with parents in any way possible and encouraged teachers to do the same. As a new principal at Colin Powell Academy, Denise Peterson became actively involved in discipline and academic instruction and made herself visible on campus. Every morning, she drove to the school's four bus stops to check in with students, and every afternoon she walked home with students who lived in the surrounding neighborhoods. Peterson got to know students and parents and, as a result, was able to defuse many discipline situations before they escalated. This presence in the community even helped her establish a good relationship with local merchants, who found that students were better-behaved when they came in after school knowing their principal was close by. Now if there is a problem, the merchants call Peterson before calling the police.

The principal's regular contact with students had an immediate impact on the culture of Colin Powell Academy. Peterson still starts her mornings greeting students at the bus stop, and she serves as a mentor to selected middle school students, who check in with their principal three times a day. Suspensions and discipline problems have dramatically decreased.

Redefining Professional Development

When professional development consists of teachers attending conferences or training on the basis of their individual interests as well as some mandated sessions, teacher collaboration rarely happens. The schools we profiled realized that professional development must be on-site and ongoing and that anytime teachers are together should be time for mutual learning. These schools changed their definition of professional development to include data analysis, professional reading, dialogue, and joint evaluation of student work. Principals kept administrative business to a minimum during staff meetings, often distributing a weekly bulletin about school business so that meetings could focus on teaching and learning.

Many schools "banked" time to carve out a weekly professional development period. Martha Baldwin School in Alhambra, California, added instructional minutes to four weekdays so that school could start later every Thursday. Staff members used that found time for grade-level meetings and whole-staff development. During grade-level meetings, teachers reviewed data and student work, using the information to plan curriculum, instruction, and assessment. Many schools found that looking at student work collaboratively made for very powerful professional development. Teachers came to agreement about what good work looks like and were able to diagnose stumbling blocks. For example, at Birmingham Senior High School in Los Angeles, teachers realized that students had grasped how to write a thesis statement but that many struggled with how to support a thesis with evidence.

Teachers cited formal time for collaboration as one of the most important factors in school improvement. One teacher from Martin Luther King Elementary School in El Centro said,

In the past, we had to touch base in the hallways, at lunch, or after school. Now, at our grade-level meetings, we analyze data from our six-week assessments and we look at student work. We compare our data to see if one of us is having more success with a concept, so that person can help the rest of us. We give each other support and ideas as to how we can improve.

Standards-Based Curriculum and Instruction

Too many schools lack continuity in curriculum and instruction. There might be pockets of excellence in certain classrooms, but no consistency. The schools we interviewed realized the importance of having all teachers on the same page, first determining priorities through data analysis and then aligning curriculum, instruction, and assessments within grade levels and schoolwide to ensure continuity of instruction.

A prime example is teachers' practice at Merced Elementary School in West Covina, California. Teachers hold weekly grade-level meetings to plan instruction that is aligned with state standards and with previously agreed-on assessments of quality performance. All students in a given grade level receive the same instruction and homework with the same expectations every day. Grade-level teams also meet periodically with other grade levels to ensure articulation throughout the school. Merced Elementary's principal, Marjorie Miller, regularly assigns twin students to different classrooms and expects that their parents will find homework focusing on the same standards assigned by both teachers each night.

When observing in classrooms, administrators in successful schools like Merced look for similar curriculum and instruction as they move among different classes within each grade level. Principals ensure that students have equal access to the instruction and that instruction is standards-based. Lis Ramos Hanacek, principal at Martha Baldwin, told us,

Schoolwide instructional strategies are visible in our literacy program. A visitor to any classroom during our basic skills literacy program would see the same implementation of phonics awareness. They would see comprehension strategies that are common across every single grade level.

Drawing in Parents

Educators often see parent involvement in terms of what parents need to do, such as to help their children with homework. These schools instead focused on how they could meet parents' needs—helping parents feel comfortable at the school, better involving them in their children's schooling, and creating a sense of community. Principals ensured that school staff members were visible and regularly communicated with parents, especially when there was *not* a problem. Many schools offered resources for parents, such as loaning out English and Spanish books and laptop computers or hosting English as a second language classes.

At Rancho Santa Gertrudes Elementary School in Santa Fe Springs, California, principal Jonathan Vasquez draws in parents who want to volunteer but who don't feel comfortable participating in the classroom or cannot commit to a specific time. He set aside a room at the school where parents can get together to socialize and help teachers. Teachers leave a list of specific job requests in the room, along with instructions and needed materials; parents can choose any job and complete it as time allows.

Schools on a Journey

Our interviews with these "schools on the move" confirmed another important aspect of school improvement that research has suggested: The school improvement process is a complex puzzle with many pieces. No school identified a single program it adopted or a curriculum it purchased as a major turning point. All the principals we spoke with said that they can and will continue to do more to improve the achievement of all students. School improvement is an arduous journey rather than a destination.

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Culture shift doesn't occur overnight — or without conflict

Staff members of every school face an inevitable question each year: What happens in our school when, despite our best efforts in the classroom, a student does not learn?

In traditional schools, the answer is left to the discretion of the individual classroom teacher, who is free to respond in different ways. The support a student will (or will not) receive depends on his or her teacher's practices, rather than a collective effort and a coordinated response. In truth, most schools play a form of educational lottery with children.

In professional learning communities, however, schools create a systematic response — processes to monitor each student's learning and to ensure that a student who struggles is provided additional time and support for learning according to a schoolwide plan. Furthermore, the response is timely. Students are identified as soon as they experience difficulty, allowing the school to focus on intervention rather than remediation. The response is directive. Students are not invited to seek extra help; they are required to receive the additional assistance and devote the extra time necessary to master the learning.

This coordinated system of support for students never occurs by chance. It can only occur when school leaders work with staff to develop a plan of intervention, carefully monitor the implementation of that plan, and confront those who disregard it. Furthermore, an effective system of intervention is not merely an add-on to existing school structures and assumptions, but represents a natural outgrowth of strong school cultures dominated by certain unifying concepts.

Boones Mill Elementary School in Franklin County, Va.; Los Penasquitos Elementary School in Rancho Penasquitos, Calif.; Freeport Intermediate School in Freeport, Texas, and Adlai Stevenson High School in Lincolnshire, Ill., illustrate this systematic approach to responding when students do not learn (DuFour, DuFour, Eaker, & Karhanek, 2004). The schools could not be more dissimilar in terms of size, geographic location, accessibility to resources, and the students and the communities they serve. Yet these schools share common themes.

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One of the most evident commonalities is that the staff in each school is emphatic about and fixated on the fundamental purpose of the school — high levels of learning for all students. There is no ambiguity and no hedging about their goal. No one suggests that all kids will learn if they are conscientious, responsible, attentive, developmentally ready, fluent in English, and come from homes with concerned parents who take an interest in their education. There is no hint that staff members believe they can help all kids learn if class sizes are reduced, more resources are made available, new textbooks are purchased, or more support staff are hired. In these four schools, staff members embraced the premise that the very reason their schools exist is to help all their students — every one of the flawed, imperfect boys and girls who come to them each day — acquire essential knowledge and skills using the resources available to the school.

In each issue of *JSD*, Rick DuFour writes about effective leadership. His columns can be found at www.nsdc.org/library/authors/dufour.cfm

The collective commitment to high levels of learning for every student led these schools to assess the impact of their efforts and decisions based on tangible results. When teachers in a school are truly focused on student learning as their primary mission, they inevitably seek valid methods to assess the extent and depth of that learning. The teachers in these four schools all found that frequent common assessments, developed collaboratively and scored by every teacher of a grade level or course, were a vital resource in their efforts to monitor student learning. Doug Reeves (2004, p. 114-115) describes this process as "the gold standard in educational accountability" because these assessments are used to "improve teaching and learning, not merely to evaluate students and schools."

The teachers in the four schools embrace data and information from their common assessments because the assessments provide timely and powerful insights into their students' learning. They do not denigrate data that suggest all is not well, nor do they blindly worship means, modes, and medians. They have a healthy respect for the results of their common assessments because those assessments help them monitor the effectiveness of their teaching and identify individual students who are experiencing difficulty. Once those students are identified, the schoolwide system

of intervention ensures that the students immediately receive additional time and support for learning.

HOW LEADERS CREATE A CULTURE COMMITTED TO LEARNING

A critical element in creating these powerful school cultures is the principal's leadership. Each is clearly committed to empowering staff, delegating authority, and developing collaborative decision-making processes, but none is unwilling to confront a staff member who violates the fundamental concepts of the school's culture. Leadership is widely distributed in each school, with clearly delineated guiding coalitions overseeing the improvement process. The collaborative team structures in place in each school also encourage fluid situational leadership throughout the school. When a team discovers that one of its members has special expertise in a particular content area, in teaching a concept, in developing effective assessments, or in meeting the needs of a particular kind of learner, that member naturally assumes temporary leadership based on that expertise when the team focuses on that topic. The principals delegate authority and serve as leaders of leaders rather than the central problem solver of the school.

Nevertheless, in the early stages of implementing the changes that helped the school become a professional learning community, each principal faced challenges from one or more staff members who either aggressively or passively resisted the school's new direction. The consistent way the principals dealt with staff challenges offers important insights into leading the professional learning community process. In every case, the principal met with the teacher privately, stated concerns very directly, and identified the specific steps the teacher needed to take to remedy the situation. Finally, the principal asked how he or she might help the teacher make the necessary changes.

The principals delegate authority and serve as leaders of leaders rather than the central problem solver of the school.

The teachers did not always respond positively to these discussions. Some became quite emotional and defensive. The principals, however, did not hedge. They made it clear that the teacher's behavior was unacceptable and that the need for change was imperative. They did so without rancor, but they left no doubt about their expectations.

Perhaps there are schools that have made the transition to a professional learning community without conflict or anxiety, but I am unaware of any. Disagreements and tension are to be expected. The question schools must face is not, "How can we eliminate all potential for conflict as we go through this process?," but rather, "How will we react when we are immersed in the conflict that accompanies significant change?" In *Crucial Conversations* (Patterson, Grenny, McMillan, & Switzler, 2002), the authors contrast how teams respond when faced with conflict. Ineffective teams will ignore the problem, letting it fester and build until resentment and frustration lead to an explosion of accusations and recrimination. Good teams will take the matter to the boss and ask that he or she deal with the problem and find a satisfactory solution. Great teams will deal with the issue themselves, engaging in open dialogue and applying positive peer pressure to bring about the desired change.

The problem in schools is that teams almost never start out as great teams. Before they get to the point where team members can work together to resolve the matter, they likely will need the principal to help remedy the situation. A critical factor in creating the learning-centered culture of these four schools was the principal's willingness to confront obvious violations of the concepts upon which those cultures were built.

Culture has been defined as "the way we do things around here." Leaders shape the norms of behavior (and thus the culture) of their organizations in a number of ways. When principals work with staff to build processes to monitor each student's learning and to develop systems of intervention that give students additional time and support when they experience difficulty, they create the structures that support the concept of learning for all. When they give staff clear parameters to guide their work but considerable autonomy in implementation, they increase the likelihood that staff members will embrace that concept. But when principals are unwilling to tolerate actions that violate the underlying values of the culture, they use a powerful strategy for shaping the norms of behavior within their school.

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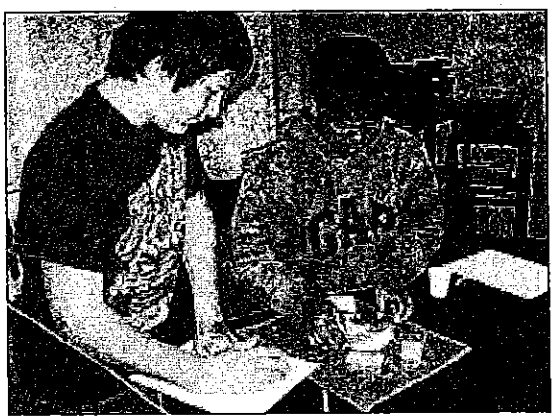

Students in the Bartholomew (Ind.) Consolidated Schools learn about continental plate movement using graham crackers and icing.

Volume 28, Number 6
November/December 2012

Bringing UDL into the Mainstream

Districts seek ways to implement universal design

By ALEXANDER RUSSO

For the past several years, new teachers joining the Bartholomew (Ind.) Consolidated School Corporation have been encouraged to watch a video introducing the preferred method of teaching in the district. Rather than highlighting a single approach, however, the video is all about encouraging teachers to use varied ways and materials to present new information to assess learning, be it aurally through talking iPads, visually through doodles on whiteboards, creatively through art projects and games, or by using old-fashioned pen and paper. That's because the preferred method of teaching in Bartholomew County is UDL, or Universal Design for Learning.

"When a building is designed, it is made accessible," says the narrator of the video entitled *UDL in Five Minutes*, which in itself models the approach by incorporating text, visuals, and speech. "Ramps are put in. Braille is posted. The fire alarms have flashing lights, and restrooms are made accessible. These are just a few of the accommodations experts take into account when designing a building. They do not wait to see who will be entering the building or using the space. Instead, they design the building so it is automatically accessible to most people. This is how teachers implementing UDL approach lesson planning."

UDL Implementation Checklist

Montgomery County's Universal Design for Learning (UDL) Classroom Observation Data Collection form includes these "Look Fors" in two areas: student choices and flexibility in teacher presentations.

- Students are provided choices for responding (verbal, written, drawing, physical demonstration, technology).
- Students are provided choices for tools (paper-pencil, computer, alternatives to handwriting, calculator).
- Students are provided choices in methods (stations, centers, groups).
- Students demonstrate familiarity with expectations, procedures, and routines related to choice and options in learning tools, materials, and methods.
- Teachers present curriculum in additional formats beyond viewable text and the teacher speaking (audio, video, pictures, charts).
- Teachers use multiple types of explanatory devices (concept maps, graphic organizers, models, manipulatives).
- Teachers use drawing or images in paper handouts and presentations to complement text and a teacher speaking.

1. Source: Montgomery County Public Schools. Available online at www.montgomeryschoolsmd.org/departments/hiat/udl_implementation/walk_through.shtm

Up and Away By Mike Schmoker

The formula is well-known, now we need to follow it.

Journal of Staff Development, Spring 2002 (Vol. 23, No. 2)
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Some schools, despite demographic disadvantages and a history of low achievement, can and do improve. Entire school districts, including those with large disadvantaged populations, have improved significantly--and fairly quickly (Schmoker, 2001). Quite recently, whole states such as Virginia and Massachusetts have been startled at the dramatic increases in urban and low-performing schools passing even the most difficult state exams (Seymour, 2001; Greenberger, 2001).

Even more hopeful is that the best and most reliable methods for realizing such improvements are largely *simple and direct*. And they are eminently replicable. The issue is not whether we can expect such gains. We can. The real problem--and it is hard to convey this with enough emphasis--is our tendency to ignore or underestimate the most effective, simple methods in favor of simplistic methods: an overemphasis on a single classroom strategy or on elaborate, unwieldy, unproven improvement or accreditation schemes.

There is substantial evidence that results are virtually inevitable when teachers, working in teams:

- Focus substantially--though not exclusively--on assessed standards.
- Review simple, readily available achievement data to set a limited number of measurable achievement goals in the lowest-scoring subjects or courses and target specific standards where achievement is low within that course or subject area.
- Work regularly and collectively to design, adapt, and assess instructional strategies *targeted directly at specific standards* of low student performance revealed by the assessment data (e.g. "measurement" in math; "voice" in writing; "sight reading" in music).

Michael Fullan has been saying for years that successful schools are places where teams of teachers meet regularly to focus on student work through assessment and change their instructional practice accordingly to get better results (Fullan, 2000). Note the simplicity here and juxtapose it with Fullan's uneasiness with "comprehensive planning." He writes that "complex implementation plans themselves become another source of confusion and burden" causing "fragmentation and overload" (Fullan & Stiegelbauer, 1991). Years later, he writes that systemic reform has not added "*one iota of clarity to the confusion faced by the majority of teachers*" (my emphasis) (Fullan, 1994).

Respond to the research

What does this mean for staff developers?

It should mean that they become agents and advocates of simple but effective improvement mechanisms--like those outlined above. For all our grand schemes, our systemic reform, our comprehensive improvement programs, we don't engage in simple, teacher-driven processes. We have yet to respond to the research and urging from Fullan and other eminent sources that collective, targeted teacher expertise is the key to school improvement (Darling-Hammond, 1997; Rosenholtz, 1991; Little, 1987; Sparks, 1998; Stigler & Hiebert, 1999; Haycock, 1998). We have yet to respond to the large and growing number of real schools that demonstrate that these simple practices work (Schmoker, 2001; Barth, Haycock, et al., 1999).

Staff developers can promote and facilitate such exceedingly simple standards-based activities at the ground level. Consider this true story.

A team of teachers began to meet with the goal of increasing the number of students who could write good narratives. They administered their first writing assignment and scored it with a four-point rubric used for the state writing assessment (the use of which is a patently research-based practice; see Hillocks, 1987).

Then they counted the total number of students who had reached the standard--a score of 3 or better--to use as a baseline. They reviewed papers that had not met the standard and did a rough estimate to identify the area where the greatest number of students had difficulty. It was "descriptive settings." Only three or four of about 90 kids had done these well. The next step was to consult the interpretive guide to the state assessment to see exactly what an effective "descriptive setting" should look like. The teachers then brainstormed better ways to teach "descriptive settings." In less than a half-hour, they sketched out an effective lesson for addressing this area of weakness and for assessing progress between this meeting and the next, one month later.

The result: At the next meeting, they found that about 85 of those 90 students could now write good "descriptive settings." In turn, this resulted in almost half of the kids in the "below standard" category moving out and up.

One meeting. Less than 30 minutes. And the strategy was clearly portable; it could now be shared with others in the district, exponentially multiplying the impact of the team's success.

Separating good from great

There is hope for us *if we can see how different this is* from what we typically do in the name of "school improvement planning." I've reviewed hundreds of school and district improvement plans--the clearest, most revealing window into the soul of our current confusion.

What do they reveal? For all the time and good intentions invested in them, these plans themselves prevent--they supplant--processes like those described above. They fragment and complicate the academic mission. We set goals (usually far too many), but they lack

a measurable baseline. Many of them aren't goals at all. They are activities or programs (a crippling confusion in this game). Then, without even consulting the data *to identify and target specific areas of underperformance*, we generate and commit to a long list of action steps--an unfocused grab bag of strategies, many of them popular but unproven--that we will implement. And we have no way of knowing if or how well these actions are being implemented. We consume time and attend meetings and multisession trainings with no plan, between meetings, to assess student performance or to adjust instruction in light of these formative results.

At the end of the year, we submit reports not about which targeted, teacher-invented methods or strategies got results, but about what we implemented, what our committees did, and what we learned.

We could have been developing and refining terrific strategies and whole lessons that teach kids to subtract with regrouping, add and subtract positive and negative integers, or synthesize material from several articles into a coherent, persuasive piece.

Quite recently, author James Collins weighed in with his study of 1,435 organizations. What separates the good from the great? Not time-consuming "overhyped" change programs that arrive with each new CEO. It is instead highly focused team efforts conducted with "simplicity and diligence." This approach works because "real people in real companies want to be part of a winning team. They want to contribute to producing real results. ... When people begin to feel the magic of momentum, when they begin to see tangible results, that's when they line up, throw their shoulders to the wheel and push" (Collins, 2001).

Best of all, Collins says, we can build such momentum without increasing the number of hours we work.

We have to see that in our world, the world of schools, this momentum eludes us because we don't focus, unwaveringly, on short- and long-term results in specific areas of underperformance. How often in the typical school do we celebrate, say, a team's big success in getting almost every kid to translate between fractions, decimals, and percentages? When was the last time we announced and distributed a great (meaning measurably successful) lesson or strategy for ensuring that kids master polynomials or can successfully balance equations in high school chemistry? Why aren't we regularly celebrating such breakthroughs and creating "the magic of momentum"? Because instead of focusing on concrete, short- and long-term results, we focus on implementing high-sounding, time-killing, often feckless strategies or comprehensive plans or programs.

Staff developers need to help clients base improvement efforts on evidence, on what works in real schools. Planners need to know that even the most popular, name brand, whole-school reforms have a shaky record of success--or no record at all. These expensive, time-consuming programs have in fact suffered "a string of setbacks" (Viadero, 2001). Even the key advocates for these so-called "research-driven models" admit that they have had *only the most limited success in actual schools* (Fashiola &

Slavin, 1998). One recent study of large school districts found that evidence of effects typically takes a back seat to "personal testimonials, philosophical comfort ... and good marketing by developers" (Corcoran, Fuhrman, & Belcher, 2001).

These programs and their offspring neglect the evidence of simpler but more effective practices. They suffer from the most simple and obvious deficiency: They don't concentrate on how teams of teachers can improve instruction in areas of lowest performance--often one at a time--to reach measurable goals. Because they are "comprehensive," we never talk about how to teach just one difficult skill. Big programs fail because they typically consume the time and resources that could be creating opportunities for teams of practitioners to develop and refine strategies and lessons targeted toward areas of high student failure and frustration.

I have recently written of the marked success of five whole school districts and a number of individual schools, most of them facing formidable socioeconomic challenges (Schmoker, 2001). The most arresting reason for their exceptional improvement is the simplicity of their efforts--all built around the same themes: setting goals (few in number); using data to identify areas of lowest performance; and then finding, creating, and continuously refining better ways to teach to those skills using a baseline and measuring the number of students who actually learn the specific targeted skills.

These teachers employ *truly* research-based strategies like Reciprocal Reading (Berliner & Casanova, 1996) or those found in Marzano, Pickering, & Pollock's *Classroom Instruction That Works* (2001). But they don't begin with the strategy. They begin *with the specific standard or standards we want more students to learn.* Then they choose and adapt the appropriate strategy. Being specific does not mean only basic skills, as important as they are. In these schools, teachers have created new lessons and strategies for helping more students learn the elements of comparative social and economic systems, vowel sounds, the concept of light and color in physics, getting the main idea of a text.

And these districts collect and bank these lessons and strategies (Schmoker, 1999). Proven, field-tested lessons are available to other teachers within the system, organized by skill and subject. Staff developers could promote the creation of these invaluable "lesson banks" that constitute a harvest of teachers' practical, collective expertise (Stigler & Hiebert, 1999).

Conclusion

In words that resonate with most educators, Peter Drucker (1992) writes that "the largest and easiest gains in knowledge work come from redefining the task and eliminating what need not be done."

Collins writes that we must all make a "stop doing list." We must "*stop doing* anything and everything" that doesn't get us the results we want (Collins, 2001).

Results will require tough but intelligent decisions from us. To gain the results we want will require that we systematically review and eliminate unnecessary, ill-wrought goals and committee work, that we abandon ineffective but so-called "research-based" programs and strategies. Staff developers are uniquely situated to urge educators to conduct such essential reviews.

And they could also begin immediately to redefine a successful improvement effort as an *effective lesson or strategy that gets results*. These lessons might be part of a larger program or refined lessons that fit within the program. But we need to realize that a focus on lessons themselves--linked to assessed standards--provides our best chance to study and hence improve instruction. Let's begin urging educators everywhere to identify, refine, disseminate, and even publish great lessons. And not just attractive or appealing learning activities, but teacher-proven, teacher-refined lessons and units that can help students master essential standards.

Perhaps the true culmination of a professionalized teaching force would be the "lesson fairs" Stigler & Hiebert write about, paid for with the same staff development funds we now spend on expensive, bloated programs, or on consultants like me.

The evidence for this approach, in real measurable results, is compelling. Collins, like so many others, has found that large-scale success can start when just one team is given the opportunity to "create a pocket of greatness" (Collins, 2001). In our case, one good lesson could start the ball rolling.

What are we waiting for?

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How Do Principals Really Improve Schools?

Rick DuFour and Mike Mattos

Instead of micromanaging teachers, principals should lead efforts to collectively monitor student achievement through professional learning communities.

Principals are in a paradoxical position. No Child Left Behind admonished educators to use "scientific, research-based strategies" to ensure that all students learn. Likewise, Race to the Top requires educators to use "research-based" school improvement models. Unfortunately, the core strategies of both of these reform initiatives largely ignore this call for practices grounded in research. Principals are being asked to improve student learning by implementing mandated reforms that have consistently proven ineffective in raising student achievement.

The current emphasis on using more intensive supervision and evaluation of teachers to improve school performance illustrates this irony. According to Race to the Top guidelines, this more rigorous supervision process should influence a teacher's professional development, compensation, promotion, retention, tenure, and certification. Ultimately, the evaluations should reward highly effective educators with merit pay and remove those deemed ineffective.

Faulty Logic

At first glance, this approach to improving schools seems to make sense. After all, research does say that teacher quality is one of the most significant factors in student learning. Further, there's almost universal agreement that the current system of teacher evaluation in the United States is ineffective. Three of four teachers report that their evaluation process has virtually no impact on their classroom practice (Duffett, Farkas, Rotherham, & Silva, 2008). Like the children of Lake Wobegon, almost all teachers are deemed to be above average, if not superior. Tenured teachers are almost never found to be unsatisfactory. As a comprehensive study (Weisberg, Sexton, Mulhern, & Keeling, 2009) of the current system concluded, "Teacher evaluation does not recognize good teaching, leaves poor teaching unaddressed, and does not inform decision-making in any meaningful way" (p. 1).

So why not make tougher evaluation of teachers a cornerstone of school improvement? Why not require principals to spend more time in classrooms supervising and evaluating teachers into better performance?

The premise that more frequent and intensive evaluation of teachers by their principals will lead to higher levels of student learning is only valid if two conditions exist. The first is that educators know how to improve student learning but have not been sufficiently motivated to do so. The second is that principals have the time and expertise to improve each teacher's professional practice by observing that teacher in the classroom. Neither of these conditions exists.

Do Carrots and Sticks Motivate Teachers?

We can find no research to support the assumption that educators choose to use mediocre instructional strategies and withhold effective practices until they receive increased financial incentives. As former principals with almost six decades of experience working with teachers, we found that the members of our faculty, almost without exception, started each day with honorable intentions, worked tirelessly on behalf of their students, and used the best strategies they possessed to promote student success. Further, there's little evidence to support the idea that offering stronger rewards when educators move in the right direction and applying more dire consequences when they don't—dangling crunchier carrots and wielding sharper sticks—spurs teachers to better performance.

Research has consistently established that merit pay does not improve student outcomes or change teacher behavior in a positive way, that it may actually contribute to declines in student learning, and that it's typically abandoned within a few years of implementation (Fryer, 2011; Pfeffer & Sutton, 2006; Springer et al., 2011). A research-based program for improving schools would not be tied to merit pay.

As for wielding sharper sticks, in his book *Drive: The Surprising Truth About What Motivates Us*, Daniel Pink (2011) presents compelling evidence that this approach has a decidedly negative effect on the performance of knowledge workers like educators. This is not new information. In 1986, W. Edwards Deming argued that leaders must "drive out

fear" from their organizations because appeals to fear resulted in short-term thinking, fostered competition rather than collaboration, and served as a barrier to continual improvement. A research-based program for improving schools would not be tied to sanctions and punishments intended to generate fear.

The National Center for Education and the Economy (Tucker, 2011) couldn't find any evidence that the carrots-and-sticks strategy leads to improved student achievement in the United States or that any of the world's high-performing school systems use such strategies. The American Educational Research Association declared that "neither research evidence related to growth models nor best practice related to assessment supports the proposed requirement that assessment of teachers and principals be based centrally on student achievement" (Viadero, 2009). A research-based approach to school reform would not define improvement solely as higher scores on an annual standardized achievement test.

Do Principal Observations Improve Teaching Practices?

But even if we set the research aside, questions remain: Do principals have the time and expertise to enhance student learning through classroom observations? Is this the best way to improve a school?

To answer these questions, consider Tennessee, one of the first states to receive a Race to the Top grant. The Tennessee model calls for 50 percent of a teacher's evaluation to be based on principal observations, 35 percent on student growth, and 15 percent on student achievement data. Principals or evaluators must observe new teachers six times each year and licensed teachers four times each year, considering one or more of four areas—instruction, professionalism, classroom environment, and planning. These four areas are further divided into 116 subcategories. Observations are to be preceded by a pre-conference, in which the principal and the teacher discuss the lesson, and followed by a post-conference, in which the principal shares his or her impressions of the teacher's performance. Principals must then input data on the observation using the state rubric for assessing teachers. Principals report that the process requires four to six hours for each observation.

No doubt these requirements are well intentioned, but we're convinced that advocates of this approach fail to recognize the crushing demands on the contemporary principal. A synthesis of research has identified 21 different responsibilities that principals must address in an environment where any or all of those responsibilities may suddenly be put on the back burner by crises over which the principal has little control (Marzano, Waters, & McNulty, 2005).

What We Learned As Principals

But beyond the time demands, the premise behind the policy of having principals observe teachers and help them improve is fundamentally flawed. We were both award-winning principals who devoted massive amounts of time and energy to trying to improve teaching through our different systems' supervision and evaluation processes. We typically found that teachers were unpersuaded by our recommendations. After all, previous principals had found them satisfactory, if not exemplary.

Further, as middle and high school principals, we often observed teachers in content areas in which we were clueless. As former social studies teachers, we were not prepared to help a Spanish teacher improve when we couldn't understand what he or she was saying. We were ill-equipped to enhance the pedagogy of an industrial arts teacher when we were mechanically inept. Because we frequently were unable to determine the appropriateness of either the content or the level of its rigor, we had to resort to generic observations about teaching and apply what we knew about effective questioning strategies, student engagement, classroom management, and so on.

We don't mean to imply that the process was without benefits. As a new pair of eyes in the classroom, we were sometimes able to help a teacher become aware of unintended instructional or classroom management patterns. We could express appreciation for the wonderful work a teacher was doing because we had witnessed it firsthand. We observed powerful instructional strategies that we were able to share with other teachers. We increased our own knowledge about what constitutes effective teaching.

So classroom observations can be meaningful and beneficial to some extent, but principals should not use them as their key strategy for improving their schools. Perhaps intensive supervision of teaching would be a viable strategy for improving student learning—if good teaching could be reduced to a single template, rubric, or checklist aligned to

program fidelity. However, there's no such thing as a universally effective teaching strategy; the effectiveness of any given strategy can only be determined by evidence of its effect on student learning (DuFour & Marzano, 2011). The checklist approach to providing feedback to teachers doesn't enhance their pedagogical expertise. As Marzano (2009) notes, it's "antithetical to true reflective practice ... [and] is profoundly anti-professional" (p. 37).

The Case for the PLC Process

If principals want to improve student achievement in their school, rather than focus on the individual inspection of *teaching*, they must focus on the collective analysis of evidence of student *learning*.

Of course, teaching and learning are not divorced from each other. The key to improved student learning is to ensure more good teaching in more classrooms more of the time. The most powerful strategy for improving both teaching and learning, however, is not by micromanaging instruction but by creating the collaborative culture and collective responsibility of a professional learning community (PLC).

Studies conducted by the Center on Organization and Restructuring of Schools (Newmann & Wehlage, 1995); the National Commission on Teaching and America's Future (Carroll, Fulton, & Doerr, 2010); the Annenberg Institute for School Reform (2005); the Wallace Foundation (Louis, Leithwood, Wahlstrom, & Anderson, 2010); and the American Educational Research Association (Holland, 2005) provide just a small sampling of the research base that confirms the positive effect of the PLC process on both student and adult learning. As a review of the research on PLCs concluded,

The collective results of these studies offer an unequivocal answer to the question about whether the literature supports the assumption that student learning increases when teachers participate in professional learning communities. The answer is a resounding and encouraging yes. (Vescio, Ross, & Adams, 2008, p. 87)

This finding is not limited to the United States. In a study of high-performing school systems throughout the world, researchers concluded that successful systems structured their schools to function as PLCs to provide the teacher collaboration vital to powerful professional development (Barber & Mourshed, 2009). A report from the International Academy of Education (Timperley, 2008) concluded that the key to improving teaching was ensuring that educators "participate in a professional learning community that is focused on becoming responsive to students."

Research shows that educators in schools that have embraced PLCs are more likely to

- Take collective responsibility for student learning, help students achieve at higher levels, and express higher levels of professional satisfaction (Louis & Wahlstrom, 2011).
- Share teaching practices, make results transparent, engage in critical conversations about improving instruction, and institutionalize continual improvement (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010).
- Improve student achievement and their professional practice at the same time that they promote shared leadership (Louis et al., 2010).
- Experience the most powerful and beneficial professional development (Little, 2006).
- Remain in the profession (Johnson & Kardos, 2007).

Research has also established that simply providing time for educators to meet will have no effect on student learning unless their meetings focus on the right work (Saunders, Goldenberg, & Gallimore, 2009). In traditional schools, the question of who will determine what constitutes the right work becomes a question of power: Will the principal or teacher teams have the authority to determine what will happen at team meetings?

However, in a professional learning community, principals and teachers engage in collective inquiry to decide on the work that will most benefit their students. To help more students learn at higher levels, team members ask themselves,

- What knowledge, skills, and dispositions should all students acquire as a result of the unit we're about to teach?
- How much time will we devote to this unit?
- How will we gather evidence of student learning throughout the unit in our classrooms and at its conclusion as a team?

- How can we use this evidence of learning to improve our individual practice and our team's collective capacity to help students learn, to intervene for students unable to demonstrate proficiency, and to enrich the learning for students who have demonstrated proficiency?

To foster school cultures in which PLCs flourish, principals need to focus on five key steps (see "Five Steps to Success on the PLC Journey"). They can start by forming teams in which members share responsibility to help all students learn essential content and skills, providing teams with time to collaborate, helping to clarify the work that teams need to do, and ensuring that teams have access to the resources and support they need to accomplish their objectives.

Five Steps to Success on the PLC Journey

1. Embrace the premise that the fundamental purpose of the school is to ensure that all students learn at high levels and enlist the staff in examining every existing practice, program, and procedure to ensure it aligns with that purpose.
2. Organize staff into meaningful collaborative teams that take collective responsibility for student learning and work interdependently to achieve shared goals for which members hold themselves mutually accountable.
3. Call on teams to establish a guaranteed and viable curriculum for each unit that clarifies the essential learning for all students, agree on pacing guidelines, and develop and administer common formative assessments to monitor each student's learning at the end of each unit.
4. Use the evidence of student learning to identify

Students who need additional time and support to become proficient.

Students who need enrichment and extension of their learning because they're already highly proficient.

Teachers who help students achieve at high levels so team members can examine those teachers' practices.

Teachers who struggle to help students become proficient so team members can assist in addressing the problem.

Skills or concepts that none of the teachers were able to help students achieve at the intended level so the team can expand its learning beyond its members to become more effective in teaching those skills or concepts. The team can seek help from members of other teams in the building with expertise in that area, specialists from the central office, other teachers of the same content in the district, or networks of teachers throughout the United States that they interact with online.

5. Create a coordinated intervention plan that ensures that students who struggle receive additional time and support for learning in a way that is timely, directive, diagnostic, precise, and most important, systematic.

For example, a team that attempts to create a unit assessment would benefit from an overview of the research on the power of common formative assessments to improve both teaching and learning, a brief article on keys to writing good assessments, access to released sets of assessment items for the skill they're teaching, and examples of the assessment frameworks used by their state or province to ensure they become familiar with the format and rigor of those assessments. For performance-based assessments, team members might need recommendations from content experts on the criteria they should use in assessing the quality of student work as well as time to practice applying those criteria until they're able to provide students with consistent feedback.

But the most vital support a principal can give these collaborative teams is helping them use evidence of student learning to improve their teaching. When members of a team make the results from their common assessments transparent, analyze those results collectively, and discuss which instructional strategies seem most effective based on actual evidence of student learning, they're using the most powerful catalysts for improving instruction (Elmore, 2004; Fullan, 2010; Hattie, 2009). This ongoing, collective analysis of learning is far more likely to improve teaching practice than a principal stopping by a classroom a few times each year to see whether the teacher is making the right moves.

The PLC process also promotes shared leadership by empowering teams to make important decisions. Teachers have a voice in determining the content they'll teach, how they'll sequence the content, which instructional strategies they'll use, and how they'll assess student learning. At the same time, principals ask their teams to be accountable for results, and they publicly recognize and celebrate incremental progress. Principal acknowledgement and appreciation are vital to sustaining a continual improvement effort (Heath & Heath, 2010).

Finally, effective principals are willing to confront those who fail to honor the commitments to their team and their obligations to their students. These principals make it clear that an individual teacher cannot disregard the team-developed curriculum, dismiss the sequencing of content, refuse to administer the team's common assessments, or opt out of the collaborative team process in any way. They are willing to use their authority to break down the walls of educator isolation and create new norms of collaboration and collective responsibility for student learning (Bryk, Sebring, Allensworth, Luppescu, & Easton, 2010).

A Culture of Collective Responsibility

Both research and our own experience as principals have convinced us that this PLC process is more likely to improve instruction than classroom observations. An algebra teacher has a better chance of becoming more effective when he or she works with other algebra teachers weekly to improve student learning than when he or she is observed by a former social studies teacher four times a year.

Further, the PLC process has two powerful levers for changing adult behavior: irrefutable evidence of better results and positive peer pressure (Elmore, 2004; Fullan, 2010; Hattie, 2009). When team members see that students in a colleague's classroom consistently perform at higher levels on team-developed assessments, they become curious about the conditions and practices that led to those better results. Further, if a team is consistently unable to achieve its goals because the students in a team member's classroom are repeatedly unable to demonstrate proficiency, there's more pressure on the teacher in that classroom to try new practices.

So what's a principal to do when confronted with state or district policies that mandate a more stringent approach to evaluation? Although principals may be stuck with punitive accountability policies, they don't have to be stuck with a punitive mind-set (DuFour & Fullan, 2013). A highly effective principal will look for ways to align the process to a culture of collective responsibility for learner-focused outcomes.

For example, the principal can repurpose the individual teacher goal-setting process to focus on team goals. Rather than establishing goals for individual teachers that focus on teacher activities ("I will improve my ability to use differentiated instruction"), they help teams establish collective goals that focus on student learning ("Last year, 84 percent of our students demonstrated proficiency on the state assessment. This year, we will help at least 90 percent demonstrate proficiency"). These results-oriented goals help create the interdependence and mutual accountability vital to effective teams.

Principal observations can provide feedback to team members who implement new strategies as part of their action research. For example, a team may decide that members need to focus on checking for student understanding more frequently and effectively to improve achievement in a unit that has traditionally proven difficult for the students. The principal could focus on that aspect of instruction during observations and work with teachers to expand their strategies in that area. Finally, many new evaluation tools have components related to teacher collaboration. An effective principal will use that aspect of evaluation as a catalyst to strengthen the team process.

Asking the Right Question

If current efforts to supervise teachers into better performance have proven ineffective (and they have), the solution is not to double down on a bad strategy and demand more classroom observations, tighter supervision, and more punitive evaluations. The effort to improve schools through tougher supervision and evaluation is doomed to fail because it asks the wrong question. The question isn't, How can I do a better job of monitoring teaching? but How can we collectively do a better job of monitoring student learning?

Today's schools don't need "instructional leaders" who attempt to ensure that teachers use the right moves. Instead, schools need learning leaders who create a schoolwide focus on learning both for students and the adults who serve them.

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Growth Mindsets

Transforming Students' Motivation to Learn

Carol S. Dweck

Winter 2008 Brainology

This is an exciting time for our brains. More and more research is showing that our brains change constantly with learning and experience and that this takes place throughout our lives.

Does this have implications for students' motivation and learning? It certainly does. In my research in collaboration with my graduate students, we have shown that what students believe about their brains — whether they see their intelligence as something that's fixed or something that can grow and change — has profound effects on their motivation, learning, and school achievement (Dweck, 2006). These different beliefs, or mindsets, create different psychological worlds: one in which students are afraid of challenges and devastated by setbacks, and one in which students relish challenges and are resilient in the face of setbacks.

How do these mindsets work? How are the mindsets communicated to students? And, most important, can they be changed? As we answer these questions, you will understand why so many students do not achieve to their potential, why so many bright students stop working when school becomes challenging, and why stereotypes have such profound effects on students' achievement. You will also learn how praise can have a negative effect on students' mindsets, harming their motivation to learn.

Mindsets and Achievement

Many students believe that intelligence is fixed, that each person has a certain amount and that's that. We call this a *fixed mindset*, and, as you will see, students with this mindset worry about how much of this fixed intelligence they possess. A fixed mindset makes challenges threatening for students (because they believe that their fixed ability may not be up to the task) and it makes mistakes and failures demoralizing (because they believe that such setbacks reflect badly on their level of fixed intelligence). Other students believe that intelligence is something that can be cultivated through effort and education. They don't necessarily believe that everyone has the same abilities or that anyone can be as smart as Einstein, but they do believe that everyone can improve their abilities. And they understand that even Einstein wasn't Einstein until he put in years of focused hard work. In short, students with this *growth mindset* believe that intelligence is a potential that can be realized through learning. As a result, confronting challenges, profiting from mistakes, and persevering in the face of setbacks become ways of getting smarter. To understand the different worlds these mindsets create, we followed several hundred students across a difficult school transition — the transition to seventh grade. This is when the academic work often gets much harder, the grading gets stricter, and the school environment gets less personalized with students moving from class to class. As the students entered seventh grade, we measured their mindsets (along with a number of other things) and then we monitored their grades over the next two years. The first thing we found was that students with different mindsets cared about different things in school. Those with a growth mindset were much more interested in learning than in just looking smart in school. This was not the case for students with a fixed mindset. In fact, in many of our studies with students from preschool age to college age, we find that students with a fixed mindset care so much about how smart they will appear that they often reject learning opportunities — even ones that are critical to their success (Cimpian, *et al.*, 2007; Hong, *et al.*, 1999; Nussbaum and Dweck, 2008; Mangels, *et al.*, 2006).

Next, we found that students with the two mindsets had radically different beliefs about effort. Those with a growth mindset had a very straightforward (and correct) idea of effort — the idea that the harder you work, the more your ability will grow and that even geniuses have had to work hard for their accomplishments. In contrast, the students with the fixed mindset believed that if you worked hard it meant that you didn't have ability, and that things would just come naturally to you if you did. This means that every time something is hard for them and requires effort, it's both a threat and a bind. If they work hard at it that means that they aren't good at it, but if they don't work hard they won't do well. Clearly, since just about every worthwhile pursuit involves effort over a long period of time, this is a potentially crippling belief, not only in school but also in life.

Students with different mindsets also had very different reactions to setbacks. Those with growth mindsets reported that, after a setback in school, they would simply study more or study differently the next time. But those with fixed mindsets were more likely to say that they would feel dumb, study *less* the next time, and seriously consider cheating. If you feel dumb — permanently dumb — in an academic area, there is no good way to bounce back and be successful in the future. In a growth mindset, however, you can make a plan of positive action that can remedy a deficiency. (Hong. *et al.*, 1999; Nussbaum and Dweck, 2008; Heyman, *et al.*, 1992)

Finally, when we looked at the math grades they went on to earn, we found that the students with a growth mindset had pulled ahead. Although both groups had started seventh grade with equivalent achievement test scores, a growth mindset quickly propelled students ahead of their fixed-mindset peers, and this gap only increased over the two years of the study.
In short, the belief that intelligence is fixed dampened students' motivation to learn, made them afraid of effort, and made them want to quit after a setback. This is why so many bright students stop working when school becomes hard. Many bright students find grade school easy and coast to success early on. But later on, when they are challenged, they struggle. They don't want to make mistakes and feel dumb — and, most of all, they don't want to work hard and feel dumb. So they simply retire. It is the belief that intelligence can be developed that opens students to a love of learning, a belief in the power of effort and constructive, determined reactions to setbacks.

How Do Students Learn These Mindsets?
In the 1990s, parents and schools decided that the most important thing for kids to have was self-esteem. If children felt good about themselves, people believed, they would be set for life. In some quarters, self-esteem in math seemed to become more important than knowing math, and self-esteem in English seemed to become more important than reading and writing. But the biggest mistake was the belief that you could simply hand children self-esteem by telling them how smart and talented they are. Even though this is such an intuitively appealing idea, and even though it was exceedingly well-intentioned, I believe it has had disastrous effects. In the 1990s, we took a poll among parents and found that almost 85 percent endorsed the notion that it was *necessary* to praise their children's abilities to give them confidence and help them achieve. Their children are now in the workforce and we are told that young workers cannot last through the day without being propped up by praise, rewards, and recognition. Coaches are asking me where all the coachable athletes have gone. Parents ask me why their children won't work hard in school. Could all of this come from well-meant praise? Well, we were suspicious of the praise movement at the time. We had already seen in our research that it was the most vulnerable children who were already obsessed with their intelligence and chronically worried about how smart they were. What if praising intelligence made all children concerned about their intelligence? This kind of praise might tell them that having high intelligence and talent is the most important thing and is what makes you valuable. It might tell them that intelligence is just something you have and not something you develop. It might deny the role of effort and dedication in achievement. In short, it might promote a fixed mindset with all of its vulnerabilities.

The wonderful thing about research is that you can put questions like this to the test — and we did (Kamins and Dweck, 1999; Mueller and Dweck, 1998). We gave two groups of children problems from an IQ test, and we praised them. We praised the children in one group for their intelligence, telling them, "Wow, that's a really good score. You must be smart at this." We praised the children in another group for their effort: "Wow, that's a really good score. You must have worked really hard." That's all we did, but the results were dramatic. We did studies like this with children of different ages and ethnicities from around the country, and the results were the same. Here is what happened with fifth graders. The children praised for their intelligence did not want to learn. When we offered them a challenging task that they could learn from, the majority opted for an easier one, one on which they could avoid making mistakes. The children praised for their effort wanted the task they could learn from. The children praised for their intelligence lost their confidence as soon as the problems got more difficult. Now, as a group, they thought they *weren't* smart. They also lost their enjoyment, and, as a result, their performance plummeted. On the other hand, those praised for effort maintained their confidence, their

motivation, and their performance. Actually, their performance improved over time such that, by the end, they were performing substantially better the intelligence-praised children on this IQ test.

Finally, the children who were praised for their intelligence lied about their scores more often than the children who were praised for their effort. We asked children to write something (anonymously) about their experience to a left a little space for them to report their scores. Almost 40 percent of the intelligence-praised children elevated their scores, whereas only 12 or 13 percent of children in the other group did so. To me this suggests that, after students are praised for their intelligence, it's too humiliating for them to admit mistakes. The results were so striking that we repeated the study five times just to be sure, and each time roughly the same things happened. Intelligence praise, compared to effort (or "process") praise, put children into a fixed mindset. Instead of giving them confidence, it made them fragile, so much so that a brush with difficulty erased their confidence, their enjoyment, and their good performance, and made them ashamed of their work. This can hardly be the self-esteem that parents and educators have been aiming for. Often, when children stop working in school, parents deal with this by reassuring their children how smart they are. We can now see that this simply fans the flames. It confirms the fixed mindset and makes kids all the more certain that they don't want to try something difficult — something that could lose them their parents' high regard. How *should* we praise our students? How *should* we reassure them? By focusing them on the process they engaged in — their effort, their strategies, their concentration, their perseverance, or their improvement.
"You really stuck to that until you got it. That's wonderful!"
"It was a hard project, but you did it one step at a time and it turned out great!"
We praised the children in one group for their intelligence, telling them, "Wow, that's a really good score. You must be smart at this." We praised the children in the other group for their effort: "Wow, that's a really good score. You must have worked really hard." That's all we did, but the results were dramatic.
"I like how you chose the tough problems to solve. You're really going to stretch yourself and learn new things." "I know that school used to be a snap for you. What a waste that was. Now you really have an opportunity to develop your abilities."

Can a growth mindset be taught directly to kids? If it can be taught, will it enhance their motivation and grades? We set out to answer this question by creating a growth mindset workshop (Blackwell, *et al.*, 2007). We took seventh graders and divided them into two groups. Both groups got an eight-session workshop full of great study skills, but the "growth mindset group" also got lessons in the growth mindset — what it was and how to apply it to their schoolwork. Those lessons began with an article called "You Can Grow Your Intelligence: New Research Shows the Brain Can Be Developed Like a Muscle." Students were mesmerized by this article and its message. They loved the idea that the growth of their brains was in their hands. This article and the lessons that followed changed the terms of engagement for students. Many students had seen school as a place where they performed and were judged, but now they understood that they had an active role to play in the development of their minds. They got to work, and by the end of the semester the growth mindset group showed a significant increase in their math grades. The control group — the group that had gotten eight sessions of study skills — showed no improvement and continued to decline. Even though they had learned many useful study skills, they did not have the motivation to put them into practice. The teachers, who didn't even know there *were* two different groups, singled out students in the growth-mindset group as showing clear changes in their motivation. They reported that these students were now far more engaged with their schoolwork and were putting considerably more effort into their classroom learning, homework, and studying. Joshua Aronson, Catherine Good, and their colleagues had similar findings (Aronson, Fried, and Good, 2002; Good, Aronson, and Inzlicht, 2003). Their studies and ours also found that negatively stereotyped students (such as girls in math, or African-American and Hispanic students in math and verbal areas) showed substantial benefits from being in a growth-mindset workshop. Stereotypes are typically fixed-mindset labels. They imply that the trait or ability in question is fixed and that some groups have it and others don't. Much of the harm that stereotypes do comes from the fixed-mindset message they send. The growth mindset, while not denying that performance differences might exist, portrays abilities as acquirable and sends a particularly encouraging message to students who have been negatively stereotyped — one that they respond to with renewed motivation and engagement. Inspired by these

positive findings, we started to think about how we could make a growth mindset workshop more widely available. To do this, we have begun to develop a computer-based program called "Brainology." In six computer modules, students learn about the brain and how to make it work better. They follow two hip teens through their school day, learn how to confront and solve schoolwork problems, and create study plans. They visit a state-of-the-art virtual brain lab, do brain experiments, and find out such things as how the brain changes with learning — how it grows new connections every time students learn something new. They also learn how to use this idea in their schoolwork by putting their study skills to work to make themselves smarter.

We pilot-tested Brainology in 20 New York City schools. Virtually all of the students loved it and reported (anonymously) the ways in which they changed their ideas about learning and changed their learning and study habits. Here are some things they said in response to the question, "Did you change your mind about anything?" *I did change my mind about how the brain works...I will try harder because I know that the more you try, the more your brain works. Yes... I imagine neurons making connections in my brain and I feel like I am learning something. My favorite thing from Brainology is the neurons part where when u learn something, there are connections and they keep growing. I always picture them when I'm in school.* Teachers also reported changes in their students, saying that they had become more active and eager learners: "They offer to practice, study, take notes, or pay attention to ensure that connections will be made."

What Do We Value?

In our society, we seem to worship talent — and we often portray it as a gift. Now we can see that this is not motivating to our students. Those who think they have this gift expect to sit there with it and be successful. When they aren't successful, they get defensive and demoralized, and often opt out. Those who don't think they have the gift also become defensive and demoralized, and often opt out as well. We need to correct the harmful idea that people simply have gifts that transport them to success, and to teach our students that no matter how smart or talented someone is — be it Einstein, Mozart, or Michael Jordan — *no one* succeeds in a big way without enormous amounts of dedication and effort. It is through effort that people build their abilities and realize their potential. More and more research is showing there is one thing that sets the great successes apart from their equally talented peers — how hard they've worked (Ericsson, *et al.*, 2006). Next time you're tempted to praise your students' intelligence or talent, restrain yourself. Instead, teach them how much fun a challenging task is, how interesting and informative errors are, and how great it is to struggle with something and make progress. Most of all, teach them that by taking on challenges, making mistakes, and putting forth effort, they are making themselves smarter.

Carol S. Dweck is the Lewis and Virginia Eaton Professor of Psychology at Stanford University and the author of
Mindset: The New Psychology of Success (Random House, 2006).

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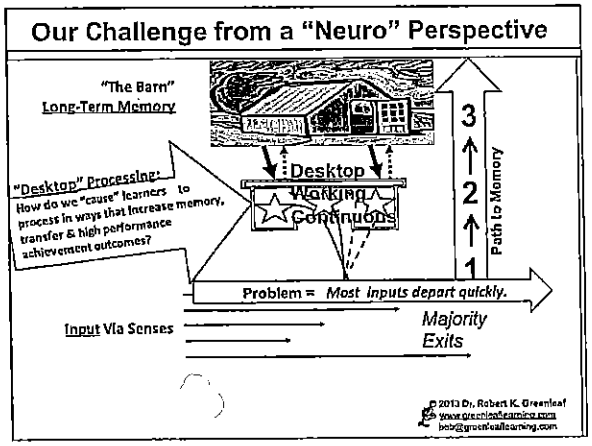
Our Challenge from a "Neuro" Perspective
"The Barn"
Long-Term Memory
"Desktop" Processing:
How do we "cause" learners to process in ways that increase memory, transfer & high performance achievement outcomes?
Desktop
Working
Continuous
3
2
1
Path to Memory
Problem = Most inputs depart quickly.
Input Via Senses
Majority
Exits
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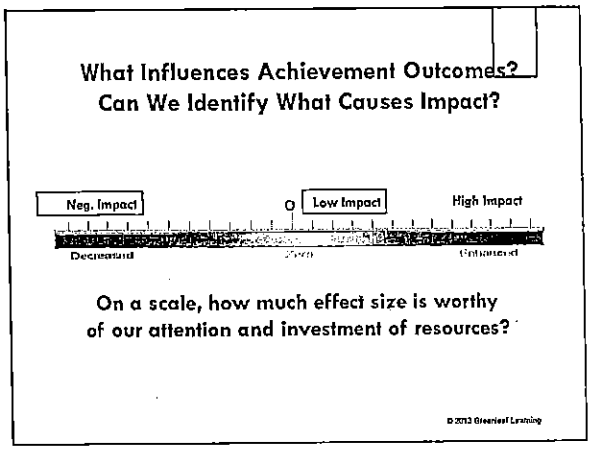
What Influences Achievement Outcomes?
Can We Identify What Causes Impact?
Neg. Impact
0
Low Impact
High Impact
Decreased
Enhanced
On a scale, how much effect size is worthy
of our attention and investment of resources?
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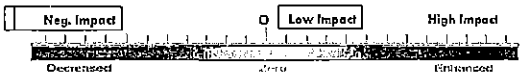
Hattie's Effect Sizes [IMPACT]



So what is the typical effect across

- 800+ meta-analysis
- 50,000 studies, and
- 200+ million students

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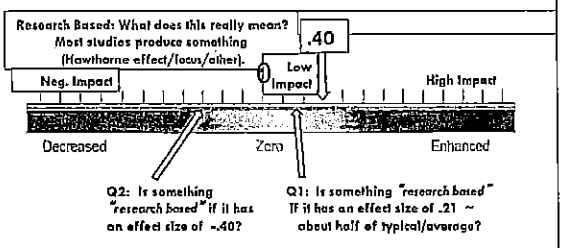
Hattie's *Typical* Effect Size [IMPACT]



<u>Bottom line</u>: All results may be "research based," however this does not ensure impact on achievement.

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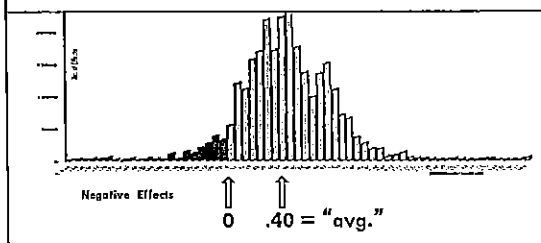
Distribution of Effect Sizes: What Does *Research Based* Really Mean?



Where do you want to put your resources?

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Rank These Twelve Common Practices

1=highest/most effect; 12=lowest/least effect

Acceleration (speed up a year vs. enrichment)
Feedback
Student-teacher relationships
Teaching study skills
Reading Recovery
Cooperative learning
Homework
Individualized Instruction
Ability grouping
Open vs. traditional classes
Retention (hold back a year)
Shifting schools

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Twelve Common Practices Ranked by Effect Size

1=highest/most effect; 12=lowest/least effect

1 Acceleration (speed up a year vs. enrichment=.39)	.88
2 Feedback	.73
3 Student-teacher relationships	.72
4 Teaching study skills	.59
5 Reading Recovery	.50
6 Cooperative learning	.41
Typical effect size	.40
7 Homework	.29
8 Individualized Instruction	.22
9 Ability grouping	.12
10 Open vs. traditional classes	.01
11 Retention (hold back a year)	-.16
12 Shifting schools	-.34

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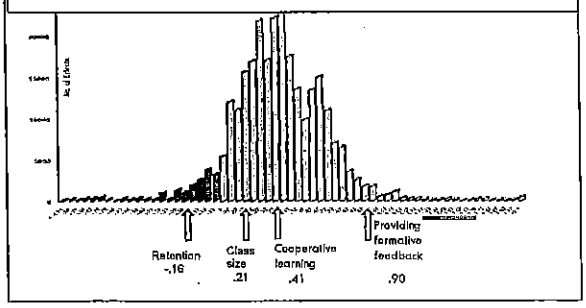
Common Effect Size Surprises

[as contrasted with "typical"]



Hattie's "Disasters"

Out of 138 categories
of Common Educational Practices

Rank	Item	Effect Size
138	Mobility (shifting schools)	-.34
137	Television	-.18
136	Retention	-.16
133	Open vs. Traditional	.01
131	Multi-grade/age classes	.04
129	Whole language	.06
125	Teacher subject matter knowledge	.09
112	Web based learning	.18
116	Home-school programs	.16
118	Problem based learning	.15

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Hattie's "Not Worth It Yet"

Out of 138 categories
of Common Educational Practices

Rank	Item	Effect Size
107	Charter Schools	.20
106	Class size	.21
104	Visual/Audio-visual	.22
103	Individualized instruction	.22

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Hattie's "Nearing Average"

Out of 138 categories
of Common Educational Practices

Rank	Item	Effect Size
99	Summer school	.23
94	Use of calculators	.27
93	Teaching test taking & coaching	.27
92	Mainstreaming	.28
88	Homework	.29
86	Inquiry based teaching	.31
87	Ability grouping for gifted students	.30
82	Simulations	.33
75	Attitude to Mathematics/Science	.36
74	Principals / School leaders	.36

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Hattie's "Average"

Out of 138 categories
of Common Educational Practices

Rank	Item	Effect Size
70	Time on Task	.38
	********** "typical" on bell curve**********	.40
63	Cooperative learning	.41
59	Self-concept	.43
58	School size	.43
57	Expectations	.43
56	Writing Programs	.44
53	Questioning	.46
52	Early Intervention	.47

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Hattie's "Let's Have Them... to...Exciting"

Out of 138 categories
of Common Educational Practices

Rank	Item	Effect Size
48	Small group learning	.49
45	Parental Involvement	.51
42	Classroom management	.52
38	Pre-term birth weight	.54
36	Peer tutoring	.55
34	Challenging Goals	.56
33	Concept mapping	.57
32	Socioeconomic status	.57
31	Home environment	.57

** NOT largely in the school's control !!*

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Hattie's "Top 10 Winners"

Out of 138 categories
of Common Educational Practices

Rank	Item	Effect Size
1	Self-reported grades (S est. of exams/grades)	1.44
2	Piagetian programs (successive thinking—count in order)	1.28
3.	Providing formative evaluation (evid based-seek data when Ss don't do well)	.90
4	Micro teaching	.88
5	Acceleration (Enrichment = .39)	.88
6	Classroom behavioral	.80
7	Comprehensive interventions for Learning disabled students (direct teaching + strategies)	.77
8	Teacher clarity (com. intentions/lesson criteria & assessment items)	.75
9	Reciprocal teaching	.74
10	Feedback (consequence of performance—S to T)	.73

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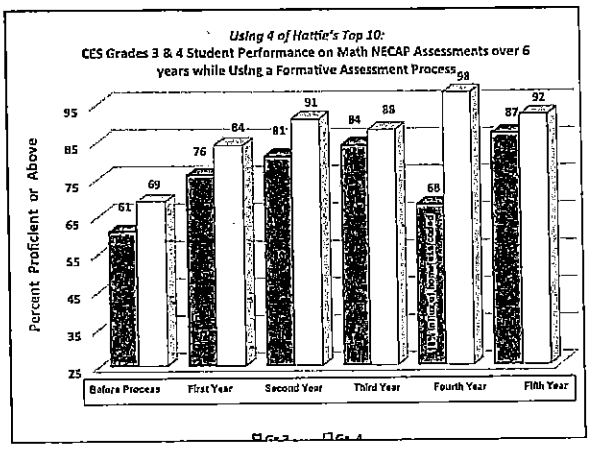
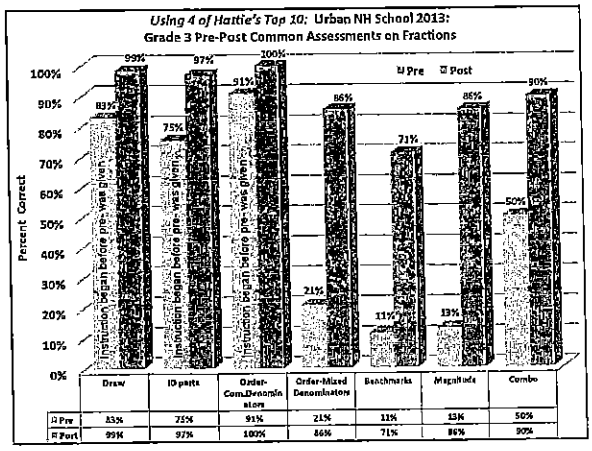
So what happens when a school uses *4 of the top 10?*

John Hattie, 2009

CATEGORY	EFFECT SIZE
* Self Reported Grades	1.2
* Piagetian Programs (thinking, not just producing)	1.2
* Formatives	0.9
* Micro-teaching (reflective teaching, analysis, etc.)	0.85
* Acceleration (for gifted students)	0.85
* Teacher Clarity (organization, guided practice, assessment, etc.)	0.75
* Feedback	0.72
* Teacher-Student Relationships	0.72
* Spaced Practice	0.70
* Reciprocal Teaching	0.70





NEW LIST 11 Effective Strategies for Achievement
a la Marzano & Haystead,
Action Research Project 2009
Overlaps Hattie's Meta-analyses Well

CATEGORY	PERCENTILE GAIN
☆ Formative Tracking Student Progress & Scoring Scales	34%
☆ Setting Objectives and Providing Feedback	25%
Identifying Similarities and Differences (classification)	20%
Building Vocabulary	20%
Interactive Games	20%
Summarizing and Note Taking	19%
Nonlinguistic Representation (dual coding-bimodal)	17%
Cooperative Learning—Student Discussion—Chunking	17%
Note Taking	17%
Homework and Practice	15%
Reinforcing Effort and Providing Recognition (Growth Mindsets)	14%

Implementation counts!!

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Hattie's "Mindset #1"
Teachers/Leaders as Evaluators

A disposition toward asking:

- How do I know this is working?
- How can I compare 'this' with 'that'?
- What is the merit and worth of this influence on learning?
- What evidence would convince you that you are wrong?
- Where is the evidence that shows this is superior to other programs?
- Where have you seen this practice *installed* so that it produces effective results?

[i.e. What evidence (data) would support this? Implementation....]

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Hattie's "Mindset #2"
It's about the teachers/leaders, not the kids!

Don't blame the kids:

- Social class/ prior achievement is surmountable
- All students can be challenged
- Strategies not styles
- Develop high student expectations
- Enhance help seeking
- Develop assessment capable students
- The power of developing peer interactions
- The power of critique/error/feedback
- Self-regulations and seeing students as teachers

[i.e. Which practices & beliefs are within our control? Which are not?

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Hattie's "Mindset #3"
Teachers/Leaders as Change Agents

Achievement results are changeable vs. immutable and fixed:
(Dweck—Growth Mindsets)

- Teaching as an enabler not a barrier
- Engage in the total learning and not break into steps and chunks
- The Power of learning intentions
- The Power of success criteria

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Activator: Passionate For Subject & Learning Teacher
Facilitator: Inquiry/Discovery Based w/Engaging Activities
Which Would Improve Achievement More?

An Activator	vs.	*A Facilitator*
Reciprocal teaching		Simulations and gaming
Feedback		Inquiry based teaching
Teaching students self-verbalization		Smaller class sizes
Meta-cognition strategies		Individualized Instruction
Direct Instruction		Problem-based learning
Mastery learning		Different by gender
Goals - challenging		Web-based learning
Frequent/ Effects of testing		Whole Language Reading
Behavioral organizers		Inductive teaching

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Activator: Passionate for Subject & Learning-Change Agent
Facilitator: Inquiry/Discovery Based w/Engaging Activities
Which Would Improve Achievement More?

An Activator		vs.	*A Facilitator*	
Reciprocal teaching	.74		Simulations and gaming	.32
Feedback	.72		Inquiry based teaching	.31
Teaching students self-verbalization	.67		Smaller class sizes	.21
Meta-cognition strategies	.67		Individualized instruction	.20
Direct Instruction	.59		Problem-based learning	.15
Mastery learning	.57		Different by gender	.12
Goals - challenging	.56		Web-based learning	.09
Frequent/ Effects of testing	.46		Whole Language Reading	.06
Behavioral organizers	.41		Inductive teaching	.06
	AVG: .60			AVG: .17

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Hattie's "Mindset #4"
Teachers/Leaders Gaining Feedback About Themselves

- Where am I going?
- How am I going?
- Where to next?

(i.e. What data/evidence best supports implementation of practices associated with the above questions?

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Hattie's "Mindset #5"
Assessment as Feedback – to Teachers & Leaders

- Who did you teach well, who not so well
- What did you teach well, not so well
- Where are the gaps, strengths, achieved, to be achieved
- Levels and Progress
- Developing a common conception of progress

(i.e. What data/evidence best supports implementation of practices associated with the above questions?

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Resources

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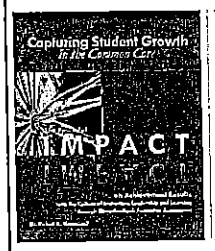
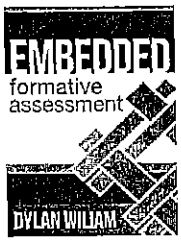


2013

2009



2011

Hattie's "Visible Learning" Meta-analyses

Rank order the 12 items below from highest(1) to lowest(12) effect size a la the meta-analyses conducted by Hattie in 2009.

- [ ] Acceleration (speed up a year)
- [ ] Feedback
- [ ] Student-teacher relationships
- [ ] Teaching study skills
- [ ] Reading Recovery
- [ ] Cooperative learning
- [ ] Homework
- [ ] Individualized instruction
- [ ] Ability grouping
- [ ] Multi-grade/age classes
- [ ] Retention (hold back a year)
- [ ] Shifting schools

EX: Characteristics of Educator Instructional Disposition

Activator: Passionate for Subject & Learning Teacher

Facilitator: Inquiry/Discovery Based w/Engaging Activities

1. *Which characteristics would be more likely to improve achievement more?*

   Circle your prediction: Activator or Facilitator

2. *Estimate the overall aggregate effect size **difference** between these two types of educator dispositions.*

   Circle your prediction: .06 .14 .22 .30 .43 .51

An Activator	**vs.**	***A Facilitator***
Reciprocal teaching		Simulations and gaming
Feedback		Inquiry based teaching
Teaching students self-verbalization		Smaller class sizes
Meta-cognition strategies		Individualized instruction
Direct Instruction		Problem-based learning
Mastery learning		Different by gender
Goals - challenging		Web-based learning
Frequent/Effects of testing		Whole Language Reading
Behavioral organizers		Inductive teaching

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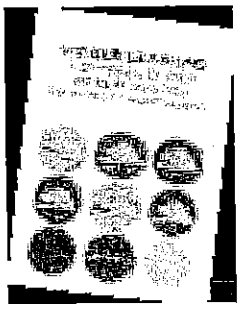
Department of Education and Early Childhood Development

Research article

April 2010

Visible learning: what's good for the goose...



Research by John Hattie suggests that what works best for students is what works best for teachers.

Professor John Hattie recently visited Victoria to discuss his latest book, *Visible Learning: A synthesis of over 800 meta-analyses relating to achievement*. His book is a culmination of 15 years of research incorporating more than 50,000 studies and over 800 meta-analyses involving millions of students and represents the largest collection of evidence-based research into what actually works in schools to improve learning.

The aim of the book is not to overwhelm the reader with the wealth of research; rather it builds an exploratory story about the influences on student learning and then defends the nature and value of this story through the research evidence.

The overall message in this book is the importance of "visible teaching" and "visible learning". Hattie suggests that visible teaching and learning occurs when learning is the explicit goal: when there is feedback given and sought and when there are active, passionate, and engaging people, including teachers, students, and peers participating in the act of learning.

Hattie points out that the main feature of the research evidence is that the "biggest effects on student learning occur when teachers become learners of their own teaching, and when students become their own teachers". This allows students to show self-regulatory attributes that are most desirable for learners, such as self-monitoring, self-evaluation, self-assessment, and self-teaching.

The research evidence supports another important message: "what teachers do matters", particularly those who teach in the most deliberate and visible way. These teachers intervene in calculated and meaningful ways to alter the direction of learning in order to attain the desired goals. They also provide students with a range of learning strategies, including direction and re-direction and maximising the power of feedback from the student. Hattie suggests that teachers need to deliberately intervene to enhance teaching and learning, particularly when the content is not understood.

Hattie argues that successful classrooms have visible teaching and learning, where there is great passion displayed by the teacher and learner, and where there is a variety and depth of skill and knowledge by both teacher and student. Teachers must know when learning is correct or incorrect; learn when to experiment; learn to monitor, seek and give feedback; and know how to try alternative learning strategies

when some don't work. A key message is "the more the student becomes the teacher and the more the teacher becomes the learner" the more successful the achievement outcomes.

Hattie examines six factors and assesses their respective contributions to achievement. These factors are: the child; the home; the school; the teacher; the curriculum and the approaches to teaching. In terms of the child, Hattie argues that the child or student brings to school factors that influence achievement (from preschool, home, and genetics) as well as a set of personal dispositions that can have marked effect on the outcomes of schooling. The home can either nurture and support achievement of students, or it can be harmful and destructive.

Hattie also suggests that positive expectations from the parents can be critical to the success of children. As such, parents need to know how to "speak the language of schooling" so that they can provide assistance to their children in terms of developing the child's learning and love of learning, and in creating high and positive shared expectations for learning.

In regards to the school, his research suggests that the most powerful effects relate to features within the school, such as the climate of the classroom, peer influences, and the lack of disruptive students in the classroom. There are a number of teacher contributions to student learning, such as teacher expectations; teachers' conception of teaching; and teacher openness. Hattie argues that the most critical aspect contributed by the teacher is the quality of their teaching as perceived by the students.

The curriculum also needs to provide opportunities for a balance between surface and deep understanding, based on specific learning intentions and success criteria. He examines these six factors and their associated variables and ranks them in terms of their effect on achievement outcomes (see Table 1: Top 20 influences on student learning and achievement).

Overall, Hattie argues that teachers need to seek feedback on their practice from both students and colleagues. They also need to help students become their own teachers. Through more visible teaching and learning, there is a greater likelihood of students reaching higher levels of achievement.

Table 1: Top 20 influences on student learning and achievement

This table contains the top 20 influences as measured by 'effect size' on student achievement. In total, Hattie analysed and ranked 138 influences.

Rank	Domain	Influence
1	Student	Self-report grades
2	Student	Piagetian programs
3	Teaching	Providing formative evaluation
4	Teacher	Micro teaching
5	School	Acceleration
6	School	Classroom behavioural
7	Teaching	Comprehensive interventions for learning disabled students
8	Teacher	Teacher clarity
9	Teaching	Reciprocal teaching
10	Teaching	Feedback
11	Teacher	Teacher-student relationship
12	Teaching	Spaced vs. mass practice
13	Teaching	Meta-cognitive strategies
14	Student	Prior achievement
15	Curricula	Vocabulary programs
16	Curricula	Repeated reading programs
17	Curricula	Creativity programs
18	Teaching	Self-verbalization/self-questioning
19	Teacher	Professional development
20	Teaching	Problem-solving teaching

Source: Hattie 2009, *Visible learning: a synthesis of over 800 meta-analyses relating to achievement.*

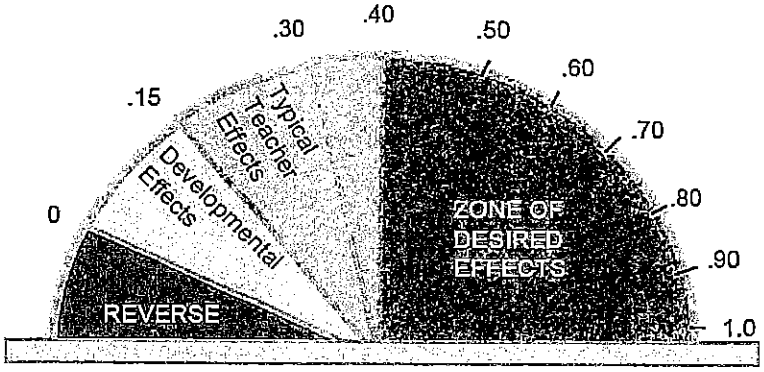


Figure 1: Influences on achievement

This figure is a barometer of influence developed by Hattie and used throughout his book. For all the variables or attributes evaluated, the average of each influence is indexed by an arrow through one of the zones on the barometer. All influences above d = 0.40 are labelled as 'Zone of desired effects' as these influences have the greatest impact on student achievement outcomes. The typical effects from teachers are between d = 0.15 and d = 0.40; and the zone between d = 0.0 and d = 0.15 is what students could probably achieve if there was no schooling.

For example, Hattie identified some of the influences that the child brings into a school (through the effects of their achievements, their personality dispositions, and their preschool experiences). Students' 'self-report grades' had the highest influence with an effect size of 1.44. This is typically formed from past experiences in learning and students have a reasonably accurate understanding of their levels of achievement and chances of success. On the other hand, Hattie found very little or non-substantial effects from gender, diet, and exercise. Gender has an effect size of 0.12. Hattie suggests that contrary to popular beliefs, males and females are similar on most, but not all, psychological variables – they are more alike than they are different.

This article was coordinated through the Research Branch, Department of Education and Early Childhood Development.

Further information about the Research Branch is available at: http://www.education.vic.gov.au/researchinnovation/default.htm

To contact the Research Branch email: research@edumail.vic.gov.au

An earlier version of this article appeared in *Shine* (April 2010; Issue 03).

John Hattie's "Top 10" Definitions
Concord School District
FM Achievement Team
December 2013

1. Self-reported grades

"Another form of prior achievement is students' estimates of their own performance- typically formed from their past experiences in learning...overall, however, students were very knowledgeable about their chances of success." (p. 43-44)

2. Piagetian programs

"Jordan and Brownlee (1981) found that the relationship between the Piagetian stage (logical operations, concrete, formal-operational) and achievement is very high. This is especially the case for Mathematics and is still high but somewhat less important in reading. In both subjects, seriation ability, or the proficiency to think successively (as is required to decode works on a page, count in order) was the highest correlate. Thus, knowing the ways in which they think, and how this thinking may be constrained by their stages of development may be most important to how teachers choose materials and tasks, how the concept of difficulty and challenge can be realized in different tasks, and the importance of developing successive and simultaneous thinking (Naglieri and Das, 1997; Sweller, 2008)". (p. 43)

3. Formative Evaluation

"Formative evaluation provides one such form of feedback. Fuchs and Fuchs (1986) examined the effects of systematic formative evaluation by the teachers and found that this technique increased achievement for students with a mild learning disability. The formative evaluations were effective across student age, treatment duration, frequency of measurement and special needs status. When the teachers were required to use data and evidence based models, effect sizes were higher than when data were evaluated by teacher

judgement. In addition, when the data was [sic] graphed effect sizes were higher than when data were simply recorded." (p. 181)

4. Micro teaching

"Micro teaching typically involves student-teachers conducting (mini-) lessons to a small group of students (often in a laboratory setting) and then engaging in post-discussions about the lessons. They are usually videotaped for this later analysis, and allow an often intense under-the-microscope view of their teaching." (p.112)

5. Acceleration

"An alternative to special classes for gifted students is to accelerate student through the curricula. 'Accelerated instruction enables bright students to work with their mental peers on learning tasks that match their abilities.' (Kulik and Kulik,1984, p. 84). It typically involves progress through an educational program at rates faster or ages younger than is conventional (Pressey, 1949), although there are many options, such as curriculum compacting or telescoping, and advanced placement." (p. 100)

6. Teacher Clarity

"One of the themes in this book is how important it is for the teacher to communicate the intentions of the lessons and the notions of what success means for these intentions. Fendick (1990) investigated teacher clarity, which he defined as organization, explanation, examples and guided practice, and assessment of student learning – such that clarity of speech was a prerequisite of teacher clarity. The correlation was 0.35 (d=0.75) and the effects were larger when students, rather than observers, rated the teachers; for college rather than elementary school teachers; and class size and subject taught made no difference." (p. 125)

7. Feedback

"It was only when I discovered that feedback was most powerful when it was from the *student to the teacher* that I started to understand it better. When teachers seek, or are at least open to,

feedback from students as to what students know, what they understand, where they make errors, when they have misconceptions, when they are not engaged – then teaching and learning can be synchronized and powerful. Feedback to teachers helps make learning visible...*Feedback is a consequence of performance..."*

"To assist in understanding the purpose, effects, and types of feedback, it is useful to consider a continuum of instruction and feedback. At one end of the continuum is a clear distinction between providing instruction and feedback. However, when feedback is combined with a correctional review, feedback and instruction become intertwined until "the process itself takes on the form of new instruction, rather than informing the student solely about correctness" (Kulhavey, 1977, p. 212). To take on this instructional purpose, feedback needs to provide information specifically relating to the task or process of learning that fills a gap between what is understood and what is aimed to be understood (Sadler, 1989).

"Feedback is information with which a learner can confirm, add to, overwrite, tune, or restructure information in memory, whether that information is domain knowledge, meta-cognitive knowledge, beliefs about self and tasks, or cognitive tactics and strategies" (Winne and Butler, 1994, p. 5740).

" The claim is made that the main purpose of feedback is to reduce discrepancies between current understandings and performance and a learning intention or goal. The strategies that that students and teachers use to reduce this discrepancy depend partly on the level at which the feedback operates." (p. 173-175)

8. Classroom Behavioral

Climate of the classroom: classroom management, group cohesion, decreasing disruptive behavior, peer influence, friendships in the classroom, low classroom peer acceptance... (p. 102-105)

9. Reciprocal Teaching

"Reciprocal teaching was devised as an instructional process to teach students cognitive strategies that might lead to improved learning outcomes (initially in reading comprehension). The emphasis is on

teachers enabling their students to learn and use cognitive strategies such as summarizing, questioning, clarifying, and predicting and these are "supported through dialogue between teacher and students as they attempt to gain meaning from text" (Rosenshine and Meister, 1994, p. 479). Each student takes a turn at being the "teacher", and often the teacher and students take turns leading a dialogue concerning sections of a text. Students check their own understanding of the material they have encountered by generating questions and summarizing. Expert scaffolding is essential for cognitive development as students move from spectator to performer after repeated modeling by adults. The aim, therefore, is to helpstudents actively bring meaning to the written word, and to assist them to learn to monitor their own learning and thinking." P. 203-204)

10. Comprehensive interventions for learning disabled students

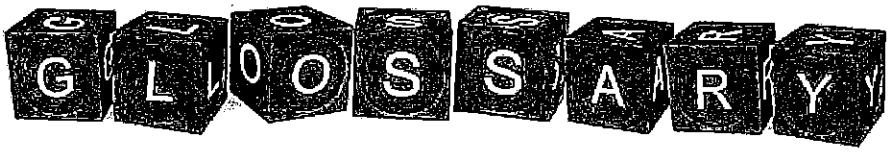
"Swanson, et al (Swanson, Hoskyn, and Lee 1999, p. 218) concluded from their extensive comparative analyses that a combined direct instruction and strategy instruction model was an 'effective procedure for remediating learning disabilities'. These two approaches are somewhat independent, hence the importance of using both to maximize the effect on achievement. The important instructional components included "attention to sequencing, drill-repetition-practice, segmenting information into parts or units for later synthesis, controlling task difficulty through prompts and cues, making use of technology, systematically modeling problem-solving steps, and making use of small, interactive groups." They also noted the much higher effects from the "bottom-up" approach to teaching reading that emphasizes accurate word recognition, decoding and letter awareness, compared to the "top down" approach is viewed as dependent on the reader's cognitive and language abilities (including familiarity with the topic of discourse). More importantly the direct instruction and strategy training models were superior to both the bottom-up and top down models."

"Forness and Kavale (1993) completed a meta-analysis of studies on strategy training addressing memory and learning deficits in learning disabled students. They found that strategy training, especially verbal elaboration, mediation, imagery and verbal rehearsal were beneficial for children with mild intellectual disabilities. All children benefitted from strategy training, both those with and without intellectual

disabilities. Xin and Jitendra (1999)...found that strategy training was effective in facilitating the acquisition f problem solving skills. The results of this study also supported the use of direct instruction, cognitive strategies, and goal-directed strategies to promote student learning. Word-problem solving instruction seemed to have a positive effect on skills maintenance and generalization." (p. 217-218)

Glossary of Hattie's influences on student achievement

Posted on February 21, 2013 by Sebastian Waack — 3 Comments ↓



This Glossary explains influences related to student achievement published in John Hattie's Visible Learning for teachers (Hattie 2012; 251ff).

Contents [hide]

1. Student Self-Reported Grades
2. Piagetian programs
3. Response to intervention
4. Teacher credibility
5. Providing formative evaluation
6. Micro-teaching
7. Classroom discussion
8. Comprehensive interventions for learning disabled students

About Visible Learning

Visible Learning means an enhanced role for teachers as they become evaluators of their own teaching. Visible Teaching and Learning occurs when teachers see learning through the eyes of students and help them become their own teachers.

Further reading

Safari Power Saver Click to Start Flash Plug-in

amazon.com

9. Teacher clarity
10. Feedback

1. Student Self-Reported Grades

Self reported grades comes out at the top of all influences. Children are the most accurate when predicting how they will perform. In a video Hattie explains that if he could write his book Visible Learning for Teachers again, he would re-name this learning strategy "**Student Expectations**" to express more clearly that this strategy involves the teacher finding out what are the student's expectations and pushing the learner to exceed these expectations. Once a student has performed at a level that is beyond their own expectations, he or she gains confidence in his or her learning ability.

Example for Self-reported grades: Before an exam, ask your class to write down what mark the student expects to achieve. Use this information to engage the student to try to perform even better.

Hattie cites five meta-studies:

- Mabe/West (1982): Validity of self-evaluation of ability (Abstract)
- Fachikov/Boud (1989): Student Self-Assessment in Higher Education (Abstract)
- Ross (1998): Self-assessment in second language testing (Abstract)
- Falchikov/Goldfinch (2000): Student Peer Assessment in Higher Education (Abstract)
- Kuncel/Crede/Thomas (2005); The Validity of Self-Reported Grade Point Averages, Class Ranks, and Test Scores (Abstract)

2. Piagetian programs

Piagetian programs are teaching methods based on Jean

Weblinks

Visible Learning plus is a professional development programme for teachers. It provides an in-depth review and change model for schools based on John Hattie's research. With a seminar and support series the Visible Learning plus team helps schools to find out about the impact they are having on student achievement. www.visiblelearningplus.com

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Piaget's theory of cognitive development and his concept of children's stages of learning. The meta-study of Jordan and Brownlee (1981) that Hattie cites found that in primary school age there is a close correlation between the performance on Piagetian tests of the thinking level and achievement tests in mathematics and reading.

The Piagetian stages include:

- **Sensorimotor stage** (new born – 2 years old): Infants learn by the basic senses including seeing, hearing and touching and construct an understanding of the world by coordinating those experiences with physical, motoric actions.
- **Pre-operational stage** (2 – 7 years old): Children are able to understand basic concepts and symbols, but do not yet understand concrete logic and cannot mentally manipulate information.
- **Concrete operational stage** (7-12 years old): Children in these ages start solving problems in a more logical fashion but abstract, hypothetical thinking has not yet developed.
- **Formal operational stage** (12 years old onwards): Children and adolescents develop abstract thinking and are able to perform hypothetical and deductive reasoning.

Watch this video to find out and see how children in different ages think differently.

Example for Piagetian programs: Focus on the thinking processes rather than the outcomes and do not impose the adult thinking process on to children.

Hattie cites one meta-study: Jordan and Brownlee (1981) Meta-Analysis of the Relationship between Piagetian and School Achievement Tests. (Abstract)

3. Response to intervention

Response to intervention (RTI) is an educational approach that provides early, systematic assistance to children who are struggling in one or many areas of their learning. RTI seeks to prevent academic failure through early intervention and frequent progress measurement. Watch this video to learn more about Response to intervention.

Examples and more information for Response to intervention: www.interventioncentral.org

4. Teacher credibility

According to Hattie **teacher credibility** is vital to learning, and students are very perceptive about knowing which teachers can make a difference. There are four key factors of credibility: trust, competence, dynamism and immediacy. In an interview Hattie puts it like that: "If a teacher is not perceived as credible, the students just turn off."

Examples for teacher credibility: Earn trust by showing trust towards pupils. Appear highly organised in the presentation of the subject matter. Develop a powerful style of speaking that uses few verbal hesitancies such as "OK" or "you know". Reduce distance between teachers and students by moving or moving away from barriers (e.g., desk, podiums). Source: cie.asu.edu

5. Providing formative evaluation

According to Hattie (2012) and Black & Wiliam (2001) **formative evaluation** refers to any activity used as an assessment of learning progress before or during the learning process itself. In contrast with formative assessment, the summative assessment evaluates what students know or have learned at the end of the teaching, after all is done. Watch this video to learn more about the difference between formative and summative assessment methods. In another video you can learn from teachers who describe their experience with formative evaluation.

Example for formative evaluation: Spend the same amount of time or even more on formative assessment as you spend on summative assessment. Give descriptive feedback to students: What is the goal? Where are you in relation to it? What can you do to close the gap?

Hattie cites two meta-studies:

- Fuchs & Fuchs (1986): Effects of systematic formative evaluation (Abstract)
- Burns & Symington (2002): A Meta-analysis of Prereferral Intervention Teams: Student and Systemic Outcomes (Abstract)

6. Micro-teaching

Micro-teaching is a video recording of a lesson with a debriefing. The lesson is reviewed in order to improve the teaching and learning experience. In *Visible Learning* Hattie describes micro-teaching as a practice (often in laboratory settings) that "typically involves student-teachers conducting (mini-) lessons to a small group of students, and then engaging in a post-discussion about the lessons" *(Hattie 2009, 112)*. You can find plenty of microteaching videos on Youtube to get an idea of this method (example). Technical aspects are less important than the later analysis which allows teachers to get a microscope-view on your own teaching. Under the guidance of a supervisor, the student-teacher is first asked to present a self feed back of his mini lesson, then the team gives feedback to provide positive reinforcement and constructive criticism.

Examples for micro-teaching: Since its invention in the 1960s at Stanford University by Dr. Dwight Allen, microteaching has become an established teacher-training procedure in many universities and school districts. You can find more information on micro-teaching here or here.

Hattie cites four meta-studies:

- Butcher (1981) An experimental investigation of the effectiveness of a value claim strategy unit for use in teacher education (Unpublished M.A. Macquarie University Sydney)
- Yeany/Padilla (1986): Training science teachers to utilize better teaching strategies (Abstract)
- Bennett (1987): The effectiveness of staff development training practices (Unpublished Ph.D. University of Oregon)
- Metcalf, K. K. (1995). *Laboratory experiences in teacher education* (Abstract)

7. Classroom discussion

Classroom discussion is a method of teaching, that involves the entire class in a discussion. The teacher stops lecturing and students get together as a class to discuss an important issue. Classroom discussion allows students to improve communication skills by voicing their opinions and thoughts. Teachers also benefit from classroom discussion as it allows them to see if students have learnt the concepts that are being taught. Moreover, a classroom discussion creates an environment where everyone learns from each other. In this video by Heather Joseph-Witham you can see how to lead a classroom discussion effectively.

Examples for an effective classroom discussion: Create a series of questions for the students to think about. Allocate enough time in the lesson for an elaborate discussion. Make sure that students can freely express their opinion without being laughed at or ridiculed. You can find helpful tips on planning, moderating and reflecting on classroom discussion in a paper by William E. Cashin (PDF).

8. Comprehensive interventions for learning disabled students

The presence of learning disability can make learning to read, write, and do math especially challenging. Hattie admits that "it would be possible to have a whole book on the effects of various **interventions for students with learning disabilities**" (Hattie 2009, 217) and refers to a meta-study of Swanson, Hoskyn and Lee (1999). To improve achievement teachers must provide students with tools and strategies to organize themselves as well as new material; techniques to use while reading, writing, and doing math; and systematic steps to follow when working through a learning task or reflecting upon their own learning. Hattie also discusses studies which found that "all children benefited from strategy training; both ths with and those without intellectual disabilities."

Examples for effective interventions for students with learning disabilities: One strategy discussed in a paper by Neil Sturomski: "Teaching Students With Learning Disabilities To Use Learning Strategies" (PDF) is called "DEFENDS". This strategic approach helps secondary students write a composition in which they must take a position and defend it (Ellis, 1994). Each letter stands for a strategic step:
D ecide on audience, goals, and position
E stimate main ideas and details
F igure best order of main ideas and details
E xpress the position in the opening
N ote each main idea and supporting points
D rive home the message in the last sentence
S earch for errors and correct

You can find further information in a papber by H. Lee Swanson and Donald Deshler (2003): Instructing Adolescents with Learning Disabilities: Converting a Meta-Analysis to Practice (PDF)

9. Teacher clarity

Hattie defines **teacher clarity** quoting the (unpublished) work of Fendick (1990) as "organization, explanation, examples and guided practice, and assessment of student learning — such that clarity of speech was a prerequisite of teacher clarity." (Hattie 2009, 126) One of the main points of Hattie's books about Visible

Learning is the importance to clearly communicate the intentions of the lessons and the success criteria. Clear learning intentions describe the skills, knowledge, attitudes and values that the student needs to learn. Teachers need to know the goals and success criteria of their lessons, know how well *all* students in their class are progressing, and know where to go next.

Examples for teacher clarity, learning goals and success criteria: This short video provides a great example for a lesson intended to let students write a good "How-to book". The teacher explains how to develop and set clear learning goals and success criteria before the students actually start the writing activity.

Hattie cites one meta-study:

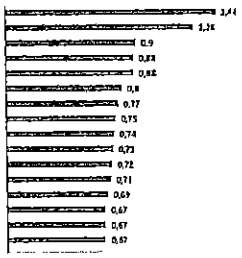
- Fendick (1990): The correlation between teacher clarity of communication and student achievement gain (Unpublished Ph.D. University of Florida)

10. Feedback

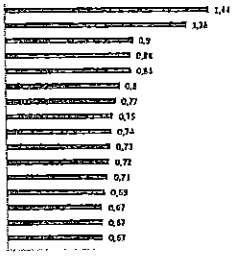
According to Hattie and Timperley (2007) **feedback** is one of the most powerful influences on learning and achievement, but this impact can be either positive or negative. They developed a model of effective feedback that identifies the particular properties and circumstances that make it work. Feedback on task, process and self regulation level is far more effective than on the Self-level (e.g. praise wich contains no learning information). Descriptive feedback is closely related to providing formative assessment (see above). In an interview Hattie emphasized that the most powerful feedback is that given from the student to the teacher. This feedback allows teachers to see learning through the eyes of their students. It makes learning visible and facilitates the planning of next steps. The feedback that students receive from their teachers is also vital. It enables students to progress towards challenging learning intentions and goals.

Examples: Related to the notion of "feed up, feed back and feed forward" teachers must answer three feedback questions: "Where

am I going? How am I going? Where to next?" Constantly ask the students in order to maximize the feedback from the learner back to the teacher. Create a classroom climate where error is welcomed. In this short video John Hattie talks about what feedback means and how to make feedback work effectively for learning in the classroom.



Hattie Ranking: Influences And



Hattie Ranking: Student Effects

About this website

3 comments on "Glossary of Hattie's influences on student achievement"

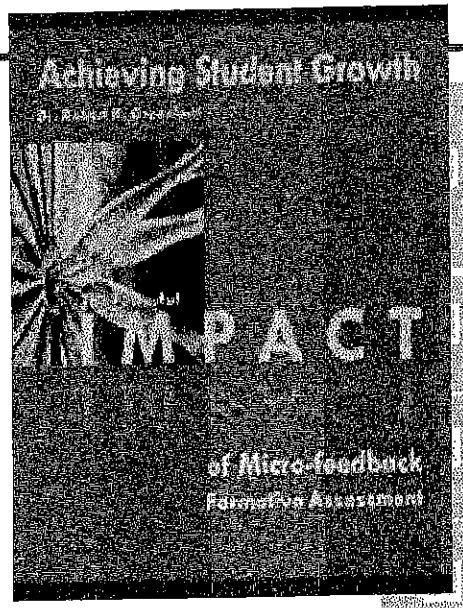
Mike Bell says:

June 20, 2013 at 5:08 PM

Hi Great website.

Just a couple of points re Hattie's top-ten.

MFA Achieving Student Growth
Chapter 3 Criteria for Effective Feedback & Appendix E (Checklist)



Criteria 1: Feedback Type: If the reason is to benefit student thinking, processing or understanding, then targeted comments (written or verbal) providing cues that will move the learner forward in his/her understanding is where learning IMPACT will come from. Feedback that consistently impacts learning outcomes includes "actionable comments" that follow the criteria below.

Criteria 2: Feedback Linked to a Learning Target: Feedback must always be linked to the intended, articulated learning target. This provides context to the learner.

Criteria 3: Feedback Amount: Feedback that is specifically targeted to one or two items that will move learning forward is far more effective for the majority of students.

Criteria 4: Feedback Location: Offering very specific feedback at the point of struggle – where the student's work suggests s/he is getting bogged down or going off course, is useful. Offer only succinct comments where the student needs to focus his/her attention.

Criteria 5: Feedback Frequency: Feedback is dependent on the type of work being done and the student. The frequency of feedback is dependent on how consistent the opportunities are to use the feedback, not just "get" the feedback.

Criteria 6: Feedback Timing: Immediate feedback, in close proximity to the work, makes good overall sense. Offer feedback fairly quickly, but as little as possible to assure the learner is moving forward – not just to complete the task.

Criteria 7: Feedback Sources: Is feedback needed from students, from teachers or both? Teachers are not the only source of feedback that can be instructive to learners. Peer to peer opportunities where students can provide each other with inputs that move thinking and learning forward can produce high levels of impact.

Criteria 8: Feedback Recipients: Feedback is not just for students. Feedback also can inform the teacher more than any or all students. Information may be about all students, some students or one student… or about next steps in instructional decision making.

MFA Appendix D: MONITORING Feedback of Non-negotiables

Achieving Student Growth

IMPACT

of Micro-Feedback Formative Assessment

	Focus	Student Work	Feedback
Regular, Frequent Meetings	All components of the 50-Minute Agenda were discussed at each meeting	Actual and current work samples and items students have done are reviewed by all members	Teachers are open and honest with feedback to each other about all learners in the grade, offering ideas and posing questions
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Common Assessment Items	A student learning target is selected within the progression as it develops from a power standard or common assessment item	Common assessment items are developed based on the review of student work items and identified learning needs	Teachers discuss and develop common practice items for all to use with students over the next 2-3 week period. All agree on which will be used for formative feedback vs. practice (these are not ALL items, but common items)
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
Common Instructional Approaches	Strategies are discussed relative to each learning issue identified, for all students – as well as for smaller groups or individual students with any remaining specific needs	Students are working on some similar items across all classes. Based on differentiated need, some may be working on more or less advanced items aligned to the learning target. At least three emphasis "moments" are planned and carried out each week to address common student learning targets	Teachers share openly what worked, and what did not, with whom, etc. Teachers explore possible strategies to employ with identified learning needs. Effective feedback strategies are brought to the table at each meeting for consideration as a strategy or in conjunction with a strategy
	☐ Yes ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

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July 2012 | Volume 54 | Number 7

Quality Feedback

What Is It and How to Give It

Katie Rapp

Writing "Nice job!" on the top of a student's paper is encouraging, but is it helpful feedback? Experts offer advice about how to give useful and usable feedback.

"The most common pitfall is thinking that giving personal praise is the same as giving feedback," says Helen Timperley in the article "The Power of Feedback" in the *Review of Educational Research*. ...praise ... doesn't necessarily provide information that will move a student toward a specific learning target. "Feedback is value-neutral help on worthy tasks. It describes what the learner did and did not do in relation to her goals," Grant Wiggins explains in the article "Assessment as Feedback," for the Johns Hopkins School of Education website. "It is actionable information, and it empowers the student to make intelligent adjustments when she applies it to her next attempt to perform." On his blog, *Big Ideas*, Wiggins offers examples:

- "'Good job!' is not feedback.
- 'You used many interesting details to make your characters come alive in this story,' is feedback.
- *B–* is not feedback.
- 'Your thesis is an interesting one, but you have not provided sufficient evidence to support it' is [feedback]."

Susan M. Brookhart, author of *How to Give Effective Feedback to Your Students*, says that feedback should appeal to both the mind (cognition) and the heart (motivation), because it gives students information they need that helps them understand where they are in their learning and what to do next.

"Once they feel they understand what to do and why, most students develop a feeling that they have control over their own learning," Brookhart says.

What Is the Goal?

Feedback must be tied clearly to a stated learning goal. Rick Stiggins, of the Assessment Training Institute, describes feedback as part of an assessment system that is completely open, with no surprises.

Teachers should present students with a list of achievement standards that they must master to be successful in the course of study. And students should understand that, at some point, they will be held accountable through a rigorous assessment, which will allow them to demonstrate their mastery of these standards. This summative assessment, which might culminate in test scores and grades, is completely separate from the formative process, which is assessment for learning, Stiggins says.

Assessment for learning includes feedback for learning, and feedback should focus on a learning target. For example, when students are developing writing proficiency, a learning goal may be to understand writing with the proper voice. Instruction begins with a student-friendly description of the learning target accompanied by examples of writing that uses the voice both well and poorly so that students understand the continuum of how their writing will progress.

Feedback tells students where they are on the continuum, Stiggins says. They understand how they are progressing toward the goal and where they need to improve so that they can continue to progress. In this way, students generate their own feedback and become partners with teachers in setting goals for what comes next in their own learning. Stiggins says that this kind of high-quality, descriptive feedback turns the "keys to the kingdom" over to students and shows them that they are in control of their learning.

Make the Time

Giving quality feedback, frankly, can take a lot of time. Carolyn Hood, a master trainer at the Learning Headquarters in San Diego, Calif., recommends that teachers prioritize the feedback that they give students by selecting bite-size chunks and focusing on big-picture learning goals.

Another way for teachers to find time for quality feedback, Hook says, is to set a goal of talking to each student perhaps once a week, rather than daily. A two- to three-minute miniconference can provide a great deal of usable feedback.

For example, a student struggling with defining a clear story line might benefit from this kind of brief, focused feedback that confirms success and then involves the student in a conversation about how to improve. She offers an example:

I can see that you are learning how to develop your story and draw a clear line from the conflict to the resolution. As a reader, I became a little confused in the character's second attempt to solve the problem. The twist seems to create another plot line. Writers try to connect new information back to the central idea for the reader. Is there a way you can clarify this idea? If it doesn't tie in smoothly, you may want to modify it. So let's talk this through. How could you connect the part about the character finding the highly confidential space vessel?

Stiggins suggests allowing students to lead conferences with their teachers as a way of helping them take control of their learning and demonstrate how they are working toward meeting the learning target.

Quick Tips

- **Tie the feedback to a specific learning goal.** Feedback should tell students where they are on the continuum, says Stiggins.
- **Provide information that students can use to improve their performance.** What actions do you want students to take? What are the growth areas and places where additional skill-building should take place?
- **Deliver feedback on student work in a timely manner.** Students need feedback while they are still working on the learning goal, not after they have moved on to something else.
- **Provide opportunities for students to participate in generating feedback rather than acting as passive receivers.** Brookhart suggests asking students questions that allow them to think about what they need help with. For example, she says, "Rather than telling the student all the things you notice about his or her work, start by asking, 'What are you noticing about this?' or 'Why did you decide to do it this way?'"
- **Feedback doesn't always have to be tied to a grade.** "When feedback is given along with a grade or evaluative comment, most students just hear judgment," Brookhart says. Look for ways to work feedback into the process before you hand out grades.
- **Help students self-regulate.** Jane E. Pollock, author of *Feedback: The Hinge That Joins Teaching and Learning*, recommends having students create goal-accounting templates so that they can track their daily effort toward meeting that goal and generate their own feedback.
- **When giving students feedback, take the time to think about what will help students actually improve.** "To be effective in supporting learning, feedback needs to focus on something the student did well along with suggestions for how to do better next time. If a teacher cannot find something positive to say, then feedback is not what needs to come next. Additional teaching needs to come next," Stiggins says.

Additional Resources

- *Accountability for Learning: How Teachers and School Leaders Can Take Charge* by Douglas B. Reeves
- *Advancing Formative Assessment in Every Classroom: A Guide for Instructional Leaders* by Susan M. Brookhart and Connie M. Moss
- *Choice Words* by Peter H. Johnston
- *Classroom Instruction That Works* by Robert J. Marzano, Debra Pickering, and Jane E. Pollock
- *Feedback: The Hinge That Joins Teaching and Learning* by Jane E. Pollock
- *Giving Effective Feedback to Your Students* (ASCD, DVD series)
- *How to Give Effective Feedback to Your Students* by Susan M. Brookhart

Concord Special Education FM 2013-2014

Presented by:
Special Ed Coordinators and
Director of Student Services

What is our district vision?

- **Concord School District Vision**
- Our vision is that all Concord students develop a passion for learning, experience excellence in their lives and believe that they have the ability to shape the future of their lives and communities.

What is our mission?

- **Our Mission Statement**
- Our students will be:
- *Active self-directed learners* who inquire creatively about their world and develop a lifelong passion for learning
- *Informed decision makers* who define issues, research alternatives, consider consequences, solve problems, and make choices that demonstrate intellectual integrity and rigorous evaluation
- *Effective communicators* who write well, read widely, listen perceptively, speak clearly, and use language, numbers and symbols to convey and receive information.
- *Effective collaborators* who assume various roles to accomplish group or community goals, using knowledge, compromise, cooperation and respect.
- *Creative producers* who use invention, design and critical assessment
- *Life planners* who use the skills and knowledge they have acquired to pursue personal and career goals that foster physical, emotional and mental well-being.
- *Community participants* who understand and practice our democratic traditions and values, including honesty, fairness and respect for human dignity and who believe they have the capacity to impact their lives and communities.

What are our beliefs for our School Community?

- **Beliefs for Our School Community**
- The Concord school community expects to act on the following beliefs:
- All students can learn and demonstrate what they learn.
- Students learn in different ways and require different methods to learn.
- All students have valuable contributions to make in school and community.
- Our community values and supports quality education and expects educated citizens.
- Community involvement is important to increase the future success of our schools.
- Families will be active partners in the process of educating their children.
- All adult members of the school community will be committed to continuous personal and professional growth.
- All members of the school community will treat each other with respect.

What should all students have?

- All students should have access to the general education curriculum.
- All students should have regular and routine progress monitoring that informs instruction, student insight and parent insight.
- All student's interventions should be consistent and woven into the school day so all educators coordinate their instructional efforts.

Concord School District

- Special Education Services at:
- Preschool
- Elementary
- Middle
- High School
- Transition to Postsecondary Education and Adulthood

Transition from Birth to Age 3?

Referrals to preschool special education...

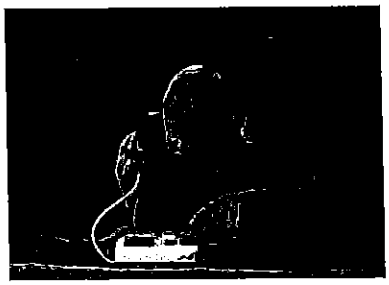
- Take place through out the year from...

- parents
- medical community
- childcare and private preschool providers
- Early Support Services

What about child find for preschoolers?

- 3 Official Child Check Clinics
  - Held on Saturdays for parent/s convenience
- Ongoing screenings are held through out the year including summer

Interagency Agreement and Partnership with ESS



What does that mean?

- Formalized interagency agreement between CSD and Community Bridges
- Details a mandated seamless transition process, procedures, and timelines to be followed
- Process is reviewed twice a year with NH DOE, CSD and Community Bridges

A seamless transition leads to...

Preschool

- What are our special education services at the preschool (ages 3 – 5) level?
- School based programming and
- Community-based programming

Preschool Students with Disabilities

- **Total Coded = 77 Approx age 2-4 = 1125**
- **Age Child Coded % Coded**
- **3 yr 4 yr 6.8%**
- **34 43**
- **School – based (BMS & MBS) = 44**
- **Community – Based Preschool = 33**

Beaver Meadow Preschool

Mill Brook Preschool

What is the number of students in community-based preschool?

- Crimson Tide Preschool = 04 students on IEPs
- Emerson Preschool = 08 students on IEPs
- Head Start Preschool = 10 students on IEPs
- Woodside Preschool = 10 students on IEPs

  32 students on IEPs

What about Community-based Preschool Progress Monitoring?

- Contractual agreement with private preschools to progress monitor each preschooler on an IEP
- Monthly meetings focus on student progress
- Annual IEP and placement meetings focus on student progress

What about BMS and MBS Preschool Progress Monitoring?

- AEPSi – Assessment, Evaluation, & Programming System for Infants and Children – federally required mandated for progress monitoring for preschoolers on IEPs
- Initial assessment – first six weeks of enrollment and conducted yearly and exit from preschool
- Staff uses language samples, classroom observations, checklists, IEP Progress Reporting twice a year
- AEPS has an embedded curriculum and this is used by our school-based preschool programs

Preschool Staff Certification...

- We are proud that all of our BMS and MBS center based preschool teachers are:
- NH DOE Early Childhood Special Education Certified.
- SLP, OT, and PT are certified/licensed and dedicated to the preschool programming.

Transitioning into kindergarten

Seamless Transition to Elementary School Programming

- Our process is...
  - To begin transition planning a year before kindergarten
  - Fall – preschool coordinator meets with elementary principals and building coordinators to review number of incoming special education students and their specific needs.
    - Elementary coordinators attend preschool team meetings to begin transition planning.
  - Winter – preschool coordinator meets with elementary special services teams to provide in-depth information on incoming kindergartners.

More to the Transition Process

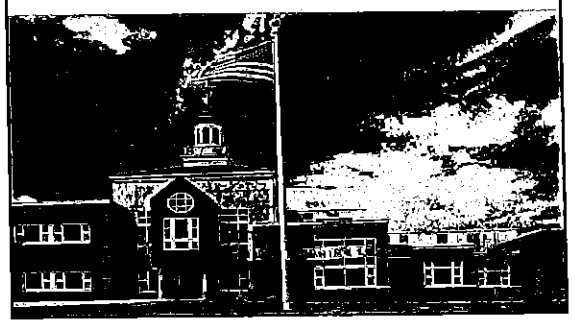
- Spring – elementary staff visit preschool programs to observe incoming kindergarten students.
- May/June – Preschool staff invite elementary teams to transition team meetings at the receiving school.
- Summer –
  - summer programming in neighborhood schools.
  - Individual programming developed as necessary
  - Transition days prior to school start-up as needed
- Fall – there is a follow-up, when necessary, between preschool staff and elementary staff.

Elementary School

Who are our elementary school students with disabilities?

- Total Population: 1,987 Students
  - Out of District Placement: 1
  - Number of Coded Students: 262 – 13.19%

Abbot Downing School



Abbot Downing School

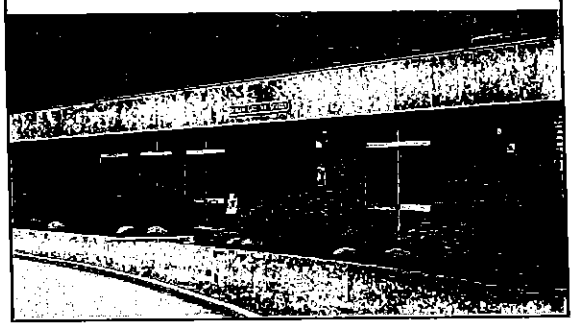
Total Pop	OOD	% Coded
429	58	01	13.52 %

Beaver Meadow School

Beaver Meadow School

Total Pop	Coded/3R	OOD	% Coded
362	54	06	00	14.92%

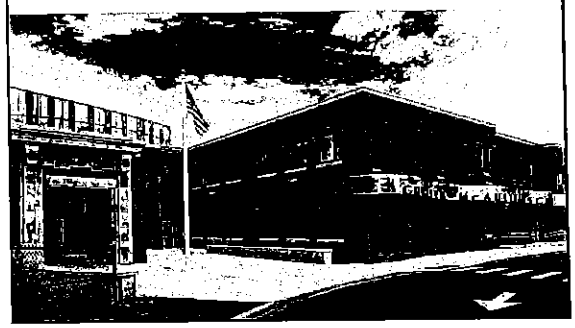
Broken Ground School



Broken Ground School

Total Pop	Coded	OOD	% Coded
368	49	00	13.32%

Christa McAuliffe School



Christa McAuliffe School

Total Pop	Coded	OOD	% Coded
422	54	00	12.80%

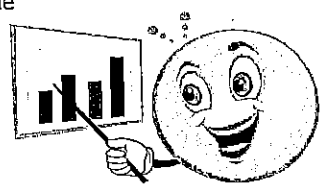
Mill Brook School

Mill Brook School

Total Pop	Coded	OOD	% Coded
406	047	00	11.58%

What is the distribution of disabilities at each elementary school i.e. % SLD, % SLP, % ED, etc?

- Let's refer to the chart...



What staff are involved in conducting evaluations following referral and what are their credentials?

- Based on evaluation questions at referral meetings, evaluators may include
  - Special Education Coordinator - LEA
  - Special Education Teacher
  - Classroom Teacher
  - Speech/Language Pathologist
  - Occupational Therapist
  - Physical Therapist
  - School Psychologist

What are the credentials of our evaluators?

- All special education staff possess current and valid N.H. Department of Education credentialing.

Do we have evaluators who can diagnose where/why the learning process is breaking down and not just state that the student is "below grade level"?

- Working toward a collaborative model of using multiple data sources to analyze where/why the learning process is breaking down.
- Data Sources:
  - Standardized testing
  - Fountas & Pinnell Benchmark Assessment
  - AIMSWeb
  - EDM Profiles of Progress
  - BEAR Assessment/Word Journeys
  - Various inventories (CAP, letter/sound knowledge)
  - Informal observation/work samples

Where do the majority of students with disabilities receive their primary instruction?

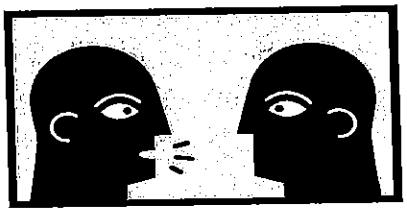
- The majority of students with disabilities receive primary instruction in the classroom.
- Pull-out or push-in instruction for small group work occurs with special educators as needed.
- Students who have discrete trial work as part of their primary instruction usually work outside of the classroom.
- Team teaching is utilized in some buildings between special ed. Teacher/general ed. Teacher.

From whom do students with disabilities receive their primary instruction?

- The district goal is for classroom teachers to provide the primary instruction for most students with disabilities.
- Students with disabilities receive supplemental interventions with special education teachers, reading teachers, tutors, and therapists, both in and out of the classroom.
- A small percentage of students with significant needs including autism, behavior, and medical needs are mainly supported by special education teachers, district consultants, educational assistants.

Do special educators attend monthly data team meetings ?

Let's discuss!



Are there other opportunities for special/general educators to meet to discuss individual student progress?

- Monthly collaborative meetings
- IEP progress checks
- Consults between special educator and classroom teachers
- IEP meetings

Who is primarily responsible for assuring that a student with disability makes growth in the general curriculum?

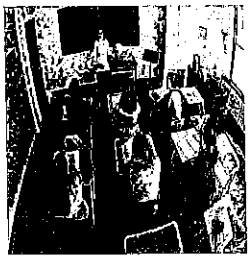
- All staff involved with the instruction of the student are directly responsible.
- Indirectly, many people are responsible for the growth of students with disabilities (staff, administration, parents, support staff)

What are our Elementary School successes that we are proud of...

- Collaboration around transitions between preschool to elementary and elementary to middle school
- Growing collaboration and shared ownership of students between special educators and general educators
- Comprehensive programming for students with autism
- Success with students with low incidence disabilities (hearing impaired, medically fragile, sight impaired)
- Relationships with families

Rundlett Middle School

Transition from Elementary Schools to Middle School



Seamless Transition to Middle School Programming

- We offer a standard transition process for all students that includes opportunities for both students and families to learn about RMS in the Spring of 5th grade.
- Coordinator discussions; Artic. Sheets; Transition Meetings; Move Up Night
- We also provide more intensive models for individuals when necessary.

Rundlett Middle School receives students from four elementary schools...

Abbot-Downing School	K - Grade 5
Beaver Meadow School	K - Grade 5
Broken Ground School	Grade 3 -5
Christa McAuliffe School	K - Grade 5

Middle School

Total Pop	OOD/Coded		% Coded
979	6	149	15.22%

- 6th grade=13.71%
- 7th grade=17.21%
- 8th grade=14.33%

What is the distribution of disabilities at Rundlett Middle School i.e. % SLD, % SLP, % ED, etc?

- Students by Primary Disability

- Autism = 9%
- ED = 9%
- ID = 4%
- MD = >1%
- OHI = 25%
- SLD = 40%
- S&L = 10%
- VI = 1%

What staff are involved in conducting evaluations following referral and what are their credentials?

- AT RMS we are fortunate enough to have staff with LD, ED and ID certifications, allowing us to have necessary evaluators for all areas of identification.

Do you have evaluators who can diagnose where/why the learning process is breaking down and not just state that the student is "below grade level"?

The educators diagnose the breakdown in the learning process thru the use of a range of data sources including standardized assessments from initial and 3 year evaluations, as well as, CBM's and progress monitor tools (primarily in the area of reading).

What are the credentials of our evaluators?

- All special education evaluators possess the New Hampshire DOE credentials for the evaluations that they conduct.

Where and from whom do the majority of students with disabilities receive their primary instruction?

- RMS offers a full continuum of services and settings but the emphasis is on inclusion wherever possible.
- The vast majority of students receive instruction in the general education classroom with support in PREP.
- There is a very small sub-set of students receiving instruction in a separate setting (primarily those w/ low-incidence disabilities).
- Our LBI program offers co-taught Math and LA classes with non-identified peers.

Do special educators attend monthly data team meetings ?

- There have been a number of data review models used at RMS over the last few years.
- The current model places an emphasis on utilizing the cluster and the common planning time.
- We are working as a building to develop a data review model based on Wellman's work.

Are there other opportunities for special/general educators to meet to discuss individual student progress?

Math:

- EDM Profiles of Progress in 6th grade.
- Mathscapes end of unit assessments 7th and 8th
- Discussion of common assessments as part of ongoing curriculum work

Who is primarily responsible for assuring that a student with disability makes growth in the general curriculum?

General Education Teachers

What are our RMS successes we are proud of?

- Reading Scores have been improving
- NECAP scores cross over
- Belief that Math can follow the same pattern

Transition from Middle School to High School

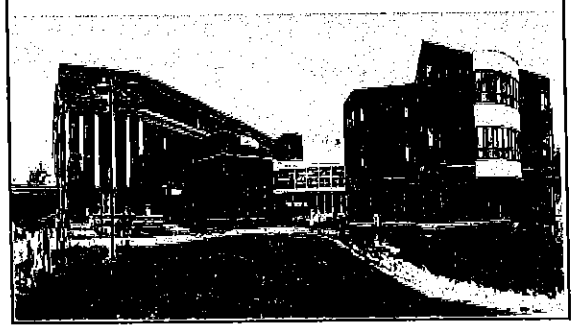
Transition Process

- Meetings in September for grade 8 students to prepare for grade 9
- CHS Staff attend meetings at the RMS
- Meetings in April at CHS
- Entering students at CHS receive ESY at CHS
- Participate in all grade 8 – 9 general education transition process

Transition to CHS

- Similar to the transition into RMS we offer a standard transition process for all students that includes opportunities for both students and families to learn about CHS in the Spring of 8th grade.

Concord High School



High School

Total Pop	OOD/Coded		% Coded
1532	18	261	17.04%

Deerfield Students @ CHS

Total Pop	Coded	% Coded
190	33	17.37%

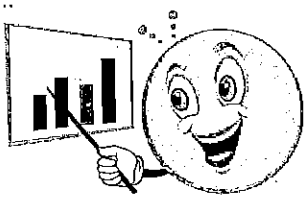
Total Pop	Coded	% Coded
1722	294	17.07%

What does our CHS special education programming look like?

- Prep Program = 52% students w/ IEP
- LBI Program = 11% students w/IEP
- ACCESS Program = 17% students w/IEP
- Advance Program = 15% students w/IEP
- Out of District = 05% students w/IEP

What is the distribution of disabilities at Concord High School i.e. % SLD, % SLP, % ED, etc?

- The chart tells us...



What staff are involved in doing evaluations following referral and what are their credentials?

Based on evaluation questions at referral meeting evaluator may include:

Special Education Coordinator – LEA Representative
Special Education Teacher
School Psychologist
General Education Teacher
Student Guidance Counselor

Do you have evaluators who can diagnose where/why the learning process is breaking down and not just state that the student is "below grade level"?

Yes, evaluators are certified in fields of :

ED, LD, ID, Speech and Language, OT, PT, Nurse

What are the credentials of your evaluators?

Possessing Certification by NH DOE

Where do the majority of students with disabilities receive their primary instruction?

General education classroom

From whom do students with disabilities receive their primary instruction?

General education teachers

Do special educators attend monthly data team meetings?

CHS has 4 student review teams with special educators on all 4 teams.

Are there other opportunities for special/general educators to meet to discuss individual student progress?

Yes, face to face informal and formal meetings, email, IEP meetings

Who is primarily responsible for assuring that a student with disability makes growth in the general curriculum?

General education teacher in collaboration with the special education casemanager

and our students with disabilities successfully graduate from CHS!!!

What are we proud of at CHS?

- Special Education and General Education Collaboration and Common Planning
- Extended Classes
- Focus on instruction, transition, and access to general education curriculum
- Ability to diversify programming

What was our graduating class of 2013 students with disabilities projected plans for postsecondary opportunities, employment and adult services?

What are the results from the 2013 CHS Graduating Class Student Survey?

- Graduating class student enrollment = 358 78% college bound
- Graduating students with IEPs = 52 reported: 14.53%

Postsecondary Plans to Enroll = 30 58% college bound

Military = 04 (Coast Guard, Navy)

Employment (Full and/or Part-time) = 04

Other = 14 Not specified = 27%

Out of District

- Educational Day Placements = 20
- Residential Placements = 01
- Court ordered Placements = 04

Out of District Students

- Preschool level = 00 student
- Elementary level = 01 student
- Middle level = 06 students
- High School level = 18 students

What does the district data tell us?

What is our district perspective?

- Per grade, how many students with disabilities are there?
- Grades K - Grade 5?
- Grades 6 - Grade 8?
- Grades 9 - Grade 12?

• What is the % of students with disabilities per level?

- Total CSD = 14.94%
- Enrollment = 4498
- Coded = 672

- Total K-5 = 13.19%
- Enrollment = 1987
- Coded = 262

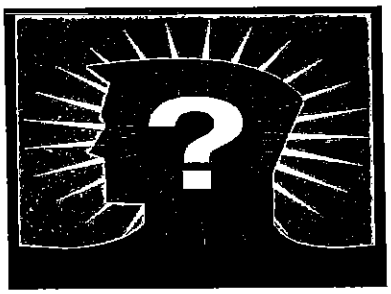
- Total 6-8 = 15.22%
- Enrollment = 979
- Coded = 149

- Total 9-12= 17.07%
- Enrollment = 1722
- Coded = 294

What is the % of students on IEPs per grade?

- Grade K =12.20%
- Grade 1 =13.16%
- Grade 2 =13.21%
- Grade 3 =15.14%
- Grade 4 =13.60%
- Grade 5 =11.85%
- Grade 6 =13.71%
- Grade 7 =17.21%
- Grade 8 =14.33%
- Grade 9 =14.89%
- Grade 10=16.24%
- Grade 11=18.46%
- Grade 12=19.03%

Questions???



What should be our next steps???

Across the Concord School District, what is the number of students per disability?

	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
PK	9	33	5	23	0	4	0	0	0	0	0	0
K	3	18	1	10	0	1	0	0	0	1	0	1
1	5	19	5	15	0	0	1	0	0	0	0	0
2	2	17	8	9	2	1	4	1	0	0	0	0
3	4	9	6	14	3	0	10	0	1	0	1	0
4	6	3	17	7	2	0	10	1	0	1	1	0
5	7	0	12	9	1	0	14	0	0	0	1	0
6	2	0	11	5	6	0	14	0	1	0	1	1
7	6	0	18	6	5	0	25	0	1	0	2	0
8	5	0	9	2	5	1	19	0	0	0	2	0
9	8	0	18	9	11	0	22	1	0	2	1	0
10	9	0	13	9	16	0	24	1	0	1	4	0
11	6	0	16	5	9	4	24	0	0	1	3	0
12	9	0	9	7	13	2	20	0	1	2	15	0
	81	99	148	130	73	13	187	4	4	8	31	2

Across the Concord School District, what is the percentage of students per disability?

	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
PK	11.11%	33.33%	3.38%	17.69%	0.00%	30.77%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
K	3.70%	18.18%	0.68%	7.69%	0.00%	7.69%	0.00%	0.00%	0.00%	12.50%	0.00%	50.00%
1	6.17%	19.19%	3.38%	11.54%	0.00%	0.00%	0.53%	0.00%	0.00%	0.00%	0.00%	0.00%
2	2.47%	17.17%	5.41%	6.92%	2.74%	7.69%	2.14%	25.00%	0.00%	0.00%	0.00%	0.00%
3	4.94%	9.09%	4.05%	10.77%	4.11%	0.00%	5.35%	0.00%	25.00%	0.00%	3.23%	0.00%
4	7.41%	3.03%	11.49%	5.38%	2.74%	0.00%	5.35%	25.00%	0.00%	12.50%	3.23%	0.00%
5	8.64%	0.00%	8.11%	6.92%	1.37%	0.00%	7.49%	0.00%	0.00%	0.00%	3.23%	0.00%
6	2.47%	0.00%	7.43%	3.85%	8.22%	0.00%	7.49%	0.00%	25.00%	0.00%	3.23%	50.00%
7	7.41%	0.00%	12.16%	4.62%	6.85%	0.00%	13.37%	0.00%	25.00%	0.00%	6.45%	0.00%
8	6.17%	0.00%	6.08%	1.54%	6.85%	7.69%	10.16%	0.00%	0.00%	0.00%	6.45%	0.00%
9	9.88%	0.00%	12.16%	6.92%	15.07%	0.00%	11.76%	25.00%	0.00%	25.00%	3.23%	0.00%
10	11.11%	0.00%	8.78%	6.92%	21.92%	0.00%	12.83%	25.00%	0.00%	12.50%	12.90%	0.00%
11	7.41%	0.00%	10.81%	3.85%	12.33%	30.77%	12.83%	0.00%	0.00%	12.50%	9.68%	0.00%
12	11.11%	0.00%	6.08%	5.38%	17.81%	15.38%	10.70%	0.00%	25.00%	25.00%	48.39%	0.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Example: The disability with the greatest number of students coded in grades PK-12 is SLD, which is 187 students.

Across the Concord School District, what is the number of students per grade with disabilities?

	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI	
PK	9	33	5	23	0	4	0	0	0	0	0	0	74
K	3	18	1	10	0	1	0	0	0	1	0	1	35
1	5	19	5	15	0	0	1	0	0	0	0	0	45
2	2	17	8	9	2	1	4	1	0	0	0	0	44
3	4	9	6	14	3	0	10	0	1	0	1	0	48
4	6	3	17	7	2	0	10	1	0	1	1	0	48
5	7	0	12	9	1	0	14	0	0	0	1	0	44
6	2	0	11	5	6	0	14	0	1	0	1	1	41
7	6	0	18	6	5	0	25	0	1	0	2	0	63
8	5	0	9	2	5	1	19	0	0	0	2	0	43
9	8	0	18	9	11	0	22	1	0	2	1	0	72
10	9	0	13	9	16	0	24	1	0	1	4	0	77
11	6	0	16	5	9	4	24	0	0	1	3	0	68
12	9	0	9	7	13	2	20	0	1	2	15	0	78

Across the Concord School District, what is the percentage of students per grade with disabilities?

	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI	
PK	12.16%	44.59%	6.76%	31.08%	0.00%	5.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
K	8.57%	51.43%	2.86%	28.57%	0.00%	2.86%	0.00%	0.00%	0.00%	2.86%	0.00%	2.86%	100.00%
1	11.11%	42.22%	11.11%	33.33%	0.00%	0.00%	2.22%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
2	4.55%	38.64%	18.18%	20.45%	4.55%	2.27%	9.09%	2.27%	0.00%	0.00%	0.00%	0.00%	100.00%
3	8.33%	18.75%	12.50%	29.17%	6.25%	0.00%	20.83%	0.00%	2.08%	0.00%	2.08%	0.00%	100.00%
4	12.50%	6.25%	35.42%	14.58%	4.17%	0.00%	20.83%	2.08%	0.00%	2.08%	2.08%	0.00%	100.00%
5	15.91%	0.00%	27.27%	20.45%	2.27%	0.00%	31.82%	0.00%	0.00%	0.00%	2.27%	0.00%	100.00%
6	4.88%	0.00%	26.83%	12.20%	14.63%	0.00%	34.15%	0.00%	2.44%	0.00%	2.44%	2.44%	100.00%
7	9.52%	0.00%	28.57%	9.52%	7.94%	0.00%	39.68%	0.00%	1.59%	0.00%	3.17%	0.00%	100.00%
8	11.63%	0.00%	20.93%	4.65%	11.63%	2.33%	44.19%	0.00%	0.00%	0.00%	4.65%	0.00%	100.00%
9	11.11%	0.00%	25.00%	12.50%	15.28%	0.00%	30.56%	1.39%	0.00%	2.78%	1.39%	0.00%	100.00%
10	11.69%	0.00%	16.88%	11.69%	20.78%	0.00%	31.17%	1.30%	0.00%	1.30%	5.19%	0.00%	100.00%
11	8.82%	0.00%	23.53%	7.35%	13.24%	5.88%	35.29%	0.00%	0.00%	1.47%	4.41%	0.00%	100.00%
12	11.54%	0.00%	11.54%	8.97%	16.67%	2.56%	25.64%	0.00%	1.28%	2.56%	19.23%	0.00%	100.00%

Example: In grade 3, there are 14 students with a primary disability of speech out of 48 students coded in grade 3.

Across the Concord School District, what is the number of students per disability per school?

	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
Preschool	9	33	5	23	0	4	0	0	0	0	0	0
Mill Brook	3	23	5	13	1	1	0	0	0	0	0	0
Christa McAuliffe	4	14	12	11	0	0	15	0	0	0	1	1
Beaver Meadow	6	11	11	15	4	1	6	0	0	0	0	0
Abbot-Downing	8	12	11	14	1	0	6	1	1	2	0	0
Broken Ground	6	6	10	11	2	0	12	1	0	0	2	0
Rundlett	13	0	38	13	16	1	58	0	2	0	5	1
Concord High	26	0	52	25	47	6	77	2	1	6	20	0
Deerfield	6	0	4	5	2	0	13	0	0	0	3	0
Total #	81	99	148	130	73	13	187	4	4	8	31	2

Across the Concord School District, what is the percentage of students per disability per school?

	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
Preschool	11.11%	33.33%	3.38%	17.69%	0.00%	30.77%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Mill Brook	3.70%	23.23%	3.38%	10.00%	1.37%	7.69%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Christa McAuliffe	4.94%	14.14%	8.11%	8.46%	0.00%	0.00%	8.02%	0.00%	0.00%	0.00%	3.23%	50.00%
Beaver Meadow	7.41%	11.11%	7.43%	11.54%	5.48%	7.69%	3.21%	0.00%	0.00%	0.00%	0.00%	0.00%
Abbot-Downing	9.88%	12.12%	7.43%	10.77%	1.37%	0.00%	3.21%	25.00%	25.00%	25.00%	0.00%	0.00%
Broken Ground	7.41%	6.06%	6.76%	8.46%	2.74%	0.00%	6.42%	25.00%	0.00%	0.00%	6.45%	0.00%
Rundlett	16.05%	0.00%	25.68%	10.00%	21.92%	7.69%	31.02%	0.00%	50.00%	0.00%	16.13%	50.00%
Concord High	32.10%	0.00%	35.14%	19.23%	64.38%	46.15%	41.18%	50.00%	25.00%	75.00%	64.52%	0.00%
Deerfield	7.41%	0.00%	2.70%	3.85%	2.74%	0.00%	6.95%	0.00%	0.00%	0.00%	9.68%	0.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Example: Out of 81 students district-wide with a primary disability of autism, Concord High has 26 students, representing 32.10%.

What is the number of students per school per disability?

	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI	
Preschool	9	33	5	23	0	4	0	0	0	0	0	0	74
Mill Brook	3	23	5	13	1	1	0	0	0	0	0	0	46
Christa McAuliffe	4	14	12	11	0	0	15	0	0	0	1	1	58
Beaver Meadow	6	11	11	15	4	1	6	0	0	0	0	0	54
Abbot-Downing	8	12	11	14	1	0	6	1	1	2	0	0	56
Broken Ground	6	6	10	11	2	0	12	1	0	0	2	0	50
Rundlett	13	0	38	13	16	1	58	0	2	0	5	1	147
Concord High	26	0	52	25	47	6	77	2	1	6	20	0	262
Deerfield	6	0	4	5	2	0	13	0	0	0	3	0	33
Total #	81	99	148	130	73	13	187	4	4	8	31	2	780

What is the percentage of students per school per disability?

	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI	
Preschool	12.16%	44.59%	6.76%	31.08%	0.00%	5.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Mill Brook	6.52%	50.00%	10.87%	28.26%	2.17%	2.17%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Christa McAuliffe	6.90%	24.14%	20.69%	18.97%	0.00%	0.00%	25.86%	0.00%	0.00%	0.00%	1.72%	1.72%	100.00%
Beaver Meadow	11.11%	20.37%	20.37%	27.78%	7.41%	1.85%	11.11%	0.00%	0.00%	0.00%	0.00%	0.00%	100.00%
Abbot-Downing	14.29%	21.43%	19.64%	25.00%	1.79%	0.00%	10.71%	1.79%	1.79%	3.57%	0.00%	0.00%	100.00%
Broken Ground	12.00%	12.00%	20.00%	22.00%	4.00%	0.00%	24.00%	2.00%	0.00%	0.00%	4.00%	0.00%	100.00%
Rundlett	8.84%	0.00%	25.85%	8.84%	10.88%	0.68%	39.46%	0.00%	1.36%	0.00%	3.40%	0.68%	100.00%
Concord High	9.92%	0.00%	19.85%	9.54%	17.94%	2.29%	29.39%	0.76%	0.38%	2.29%	7.63%	0.00%	100.00%
Deerfield	18.18%	0.00%	12.12%	15.15%	6.06%	0.00%	39.39%	0.00%	0.00%	0.00%	9.09%	0.00%	100.00%

Example: At Beaver Meadow, there are 11 students with developmental delay out of a total of 54 total students coded at Beaver Meadow, representing 20.37%.

Across Grades K-5, what is the number of students per disability?

	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
K	3	18	1	10	0	1	0	0	0	1	0	1
1	5	19	5	15	0	0	1	0	0	0	0	0
2	2	17	8	9	2	1	4	1	0	0	0	0
3	4	9	6	14	3	0	10	0	1	0	1	0
4	6	3	17	7	2	0	10	1	0	1	1	0
5	7	0	12	9	1	0	14	0	0	0	1	0
Total #	27	66	49	64	8	2	39	2	1	2	3	1

Across Grades K-5, what is the percentage of students per disability?

	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
K	11.11%	27.27%	2.04%	15.63%	0.00%	50.00%	0.00%	0.00%	0.00%	50.00%	0.00%	100.00%
1	18.52%	28.79%	10.20%	23.44%	0.00%	0.00%	2.56%	0.00%	0.00%	0.00%	0.00%	0.00%
2	7.41%	25.76%	16.33%	14.06%	25.00%	50.00%	10.26%	50.00%	0.00%	0.00%	0.00%	0.00%
3	14.81%	13.64%	12.24%	21.88%	37.50%	0.00%	25.64%	0.00%	100.00%	0.00%	33.33%	0.00%
4	22.22%	4.55%	34.69%	10.94%	25.00%	0.00%	25.64%	50.00%	0.00%	50.00%	33.33%	0.00%
5	25.93%	0.00%	24.49%	14.06%	12.50%	0.00%	35.90%	0.00%	0.00%	0.00%	33.33%	0.00%
Total #	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Example: At the Kindergarten level in the disability category of autiam, there are 3 students coded out of 27 students, which represents 11.11%.

Across Grades K-5, what is the number of students per disability per school?

Mill Brook	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
K	1	7	0	5	0	1	0	0	0	0	0	0
1	2	5	1	4	0	0	0	0	0	0	0	0
2	0	11	4	4	1	0	0	0	0	0	0	0
Total Mill Brook	3	23	5	13	1	1	0	0	0	0	0	0

Christa McAuliffe	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
K	1	4	1	1	0	0	0	0	0	0	0	1
1	0	5	0	1	0	0	1	0	0	0	0	0
2	1	3	1	2	0	0	3	0	0	0	0	0
3	0	0	1	2	0	0	2	0	0	0	1	0
4	1	2	3	2	0	0	3	0	0	0	0	0
5	1	0	6	3	0	0	6	0	0	0	0	0
Total Christa McAuliffe	4	14	12	11	0	0	15	0	0	0	1	1

Beaver Meadow	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
K	0	3	0	2	0	0	0	0	0	0	0	0
1	1	2	2	3	0	0	0	0	0	0	0	0
2	0	3	0	3	1	1	0	0	0	0	0	0
3	2	2	2	5	2	0	2	0	0	0	0	0
4	2	1	5	1	0	0	3	0	0	0	0	0
5	1	0	2	1	1	0	1	0	0	0	0	0
Total Beaver Meadow	6	11	11	15	4	1	6	0	0	0	0	0

Abbot-Downing	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
K	1	4	0	2	0	0	0	0	0	1	0	0
1	2	7	2	7	0	0	0	0	0	0	0	0
2	1	0	3	0	0	0	1	1	0	0	0	0
3	1	1	1	3	0	0	2	0	1	0	0	0
4	1	0	5	2	1	0	0	0	0	1	0	0
5	2	0	0	0	0	0	3	0	0	0	0	0
Total Abbot-Downing	8	12	11	14	1	0	6	1	1	2	0	0

Broken Ground	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
3	1	6	2	4	1	0	4	0	0	0	0	0
4	2	0	4	2	1	0	4	1	0	0	1	0
5	3	0	4	5	0	0	4	0	0	0	1	0
Total Broken Ground	6	6	10	11	2	0	12	1	0	0	2	0
Grand Total	27	66	49	64	8	2	39	2	1	2	3	1

Across Grades K-5, what is the percentage of students per disability per school?

By School	AUT	DD	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID	TBI
Mill Brook	11.11%	34.85%	10.20%	20.31%	12.50%	50.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Christa McAuliffe	14.81%	21.21%	24.49%	17.19%	0.00%	0.00%	38.46%	0.00%	0.00%	0.00%	33.33%	100.00%
Beaver Meadow	22.22%	16.67%	22.45%	23.44%	50.00%	50.00%	15.38%	0.00%	0.00%	0.00%	0.00%	0.00%
Abbot-Downing	29.63%	18.18%	22.45%	21.88%	12.50%	0.00%	15.38%	50.00%	100.00%	100.00%	0.00%	0.00%
Broken Ground	22.22%	9.09%	20.41%	17.19%	25.00%	0.00%	30.77%	50.00%	0.00%	0.00%	66.67%	0.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Example: At Mill Brook School, 23 out of 66 students have the primary disability of developmental delay, representing 34.85% of all developmental delayed coded students grades K-5.

What is the number of students in the middle school per disability per grade?

	AUT	OHI	SP	ED	MD	SLD	VI	ID	TBI
6	2	11	5	6	0	14	1	1	1
7	6	18	6	5	0	25	1	2	0
8	5	9	2	5	1	19	0	2	0
Total #	13	38	13	16	1	58	2	5	1

What is the percentage of students in the middle school per disability per grade?

	AUT	OHI	SP	ED	MD	SLD	VI	ID	TBI
6	15.38%	28.95%	38.46%	37.50%	0.00%	24.14%	50.00%	20.00%	100.00%
7	46.15%	47.37%	46.15%	31.25%	0.00%	43.10%	50.00%	40.00%	0.00%
8	38.46%	23.68%	15.38%	31.25%	100.00%	32.76%	0.00%	40.00%	0.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Example: Of the 58 students in grades 6-8 with a primary specific learning disability, 25 students, representing 43.10% are in grade 7.

What is the number of students in high school per disability?

CHS & Deerfield	AUT	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID
9	8	18	9	11	0	22	1	0	2	1
10	9	13	9	16	0	24	1	0	1	4
11	6	16	5	9	4	24	0	0	1	3
12	9	9	7	13	2	20	0	1	2	15
Total #	32	56	30	49	6	90	2	1	6	23

What is the percentage of students in high school per disability?

High School Totals	AUT	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID
9	25.00%	32.14%	30.00%	22.45%	0.00%	24.44%	50.00%	0.00%	33.33%	4.35%
10	28.13%	23.21%	30.00%	32.65%	0.00%	26.67%	50.00%	0.00%	16.67%	17.39%
11	18.75%	28.57%	16.67%	18.37%	66.67%	26.67%	0.00%	0.00%	16.67%	13.04%
12	28.13%	16.07%	23.33%	26.53%	33.33%	22.22%	0.00%	100.00%	33.33%	65.22%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Example: Of 49 students with the primary disability of ED, the highest number of students is 16 in grade 10, representing 32.65% of the students with ED.

What is the number of students in high school per disability per school?

CHS	AUT	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID
9	6	17	8	10	0	19	1	0	2	1
10	8	12	9	16	0	18	1	0	1	4
11	5	14	3	8	4	23	0	0	1	3
12	7	9	5	13	2	17	0	1	2	12
Total #	26	52	25	47	6	77	2	1	6	20

Deefield	AUT	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID
9	2	1	1	1	0	3	0	0	0	0
10	1	1	0	0	0	6	0	0	0	0
11	1	2	2	1	0	1	0	0	0	0
12	2	0	2	0	0	3	0	0	0	3
Total #	6	4	5	2	0	13	0	0	0	3

Grand Total	32	56	30	49	6	90	2	1	6	23

What is the percentage of students in high school per disability per school?

By School	AUT	OHI	SP	ED	MD	SLD	ORT	VI	HI	ID
CHS	81.25%	92.86%	83.33%	95.92%	100.00%	85.56%	100.00%	100.00%	100.00%	86.96%
Deerfield	18.75%	7.14%	16.67%	4.08%	0.00%	14.44%	0.00%	0.00%	0.00%	13.04%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Example: Of the 90 students with SLD at the high school, 13 students are from Deefield and 77 students are from Concord.