

5 Big Rocks to Increase Student Performance: What Works?

#1 Recapture Instructional and Engaged Time

1. The **power of academic learning time** has been well documented in the research. Time is important for learning. Across decades of research, **time on-task is positively associated with academic achievement.**

- Studies indicate that up to **50% of the school day is spent on non-instructional activities** in general and special education classrooms.
- Time is vital to closing the achievement gap. Bottom-line: **Time on-task matters!**
- If you want **to see test scores increase quickly ... recapture instructional time** (look at your classroom instruction and see how much academic learning time is occurring).

The Educational Research & Dissemination (ER&D) Foundation Study found the following results:

- Students were **actively engaged in learning 84% of the time during teacher led activities** (70% during seatwork).
- **Seatwork and students working alone was the dominant activity pattern** in classrooms studied (66% in reading and 75% in math).
- Student **engagement dropped considerably** when they spent **90% of their time doing seatwork.**

2. Components of Academic Learning Time

Allocated Time

Amount of time teachers allocate for instructional activities

Reduced by: Student interruptions, teacher interruptions, class visitors, announcements, transitions, and other sources of lost time.

Instructional Time

Proportion of allocated time that is actually used for instruction

Reduced by: Lack of procedural and/or substantive engagement by student(s)

Engaged Time

Proportion of instructional time during which students are engaged in learning

Reduced by: Inappropriateness of the task for student(s)

Successful and Productive Learning Time

Big Rock #1: Recapture Instructional and Engaged Time

3. **Self-Analysis of Time Use:** Teachers can calculate their own academic learning time with the goal of increasing it by 5%, 10%, etc.

		TOTAL TIME
	Total time allocated for instruction in classrooms	
Minus	Time engaged in management tasks like attendance, review of class rules, etc.	
Equals	Instructional Time – the in-class time the teacher devotes to instruction	
Minus	Time students are not paying attention to the content of the lesson	
Equals	Engaged Time – the portion of instructional time during which students are attending to the content	
Minus	Time students are not successful at the tasks they are engaged in	
Equals	Academic Learning Time – the portion of engaged time during which students are successful at their tasks.	

4. **Increasing instructional time alone does not always lead to an increase** in time that students spend learning or in the total amount learned. It is the **combination of quantity and quality of instruction that is the key to student success.**
5. **Engagement is the cornerstone and foundation of improving academic achievement** (Feldman) – all students must be dynamically engaged every day.
- Engagement is not a choice – it is the way we must do business.
 - There is a massive amount of evidence that unless individuals take a very active role in what they’re studying, unless they learn to ask questions, to do things hands on, to essentially recreate things in their own mind and transform them as is needed, the ideas just disappear. (Howard, Gardner, Harvard Graduate School of Education)
 - **Implementing Tier 2 and/or Tier 3 interventions alone will not move students into proficient or advanced levels of performance.**
 - Feldman states that students look for the “zone of minimal impact” (i.e., we have taught students that “chilling” is okay).
 - Studies show that **special needs students were significantly less engaged** in the general education classroom.
 - Good news is that we can change the game and push reset at any time.
 - **High student engagement during teacher-led instruction and group work, yielded high engagement during independent work.**
6. Teachers **must structure student engagement** by ensuring that every student responds and makes their thinking visible. (Feldman)
- **“How well we structure = how engaged students are”**
 - It does not happen by accident, it is our responsibility to make sure that school becomes a “chill-free” zone

Big Rock #1: Recapture Instructional and Engaged Time

- 7. Engagement is the observable evidence of a learner’s interest and active involvement** in all lesson content and related tasks. There are clearly articulated “evidence checks” of concrete, productive responses to instruction (i.e., “**Visible Evidence of Learning**”) – Feldman
- If you **can’t see it, you can’t measure it or improve it**
 - The **goal is to make thinking “visible”** – every student explains their thinking and receives feedback from peers and the teacher multiple times in EVERY lesson.
 - **Academic engagement is the quantity and quality of student responses:**
 - Saying
 - Writing
 - Doing (pointing, touching, demonstrating, etc.)
 - **Never more than 2-10 minutes without every student “saying, writing, doing”** in direct alignment with the curriculum (**2-10 seconds for K to 3rd grade**)
 - **“20/80 Dilemma”:** Studies show that 20% of the students are responsible for 80% of the doing (answering, asking, volunteering, etc.) – we must flip this equation
 - **Examples of effective practices** to ensure that ALL are engaged:
 - Choral response
 - Precision Partner and Small Group Responses (if task warrants)
 - Written Responses
 - Individual Responses (AFTER rehearsal/practice)
 - List/write
 - If it is worth doing, ensure that ALL students are “doing the doing” and that ALL students are ready/able to participate (scaffold as necessary to ensure ALL means ALL)
- 8. We can change current practice to increase academic learning time by breaking old habits that don’t work.**
- **Common instructional practices that don’t work** (“old school”)
 - Teacher asks questions and students raise hands to answer
 - Teacher asks “does anyone know?”
 - Teacher asks “who can tell me?”
 - Teacher asks “who would like to share?”
 - Teacher asks “who has an idea?” etc.
 - **Expect off-task performance under these task conditions:**
 - Too long, too hard, too boring, too much repetition
 - Students don’t quite know what to do (i.e., directions are not clear)
 - Students don’t have the skills to perform
 - Unscheduled interruptions, public announcements, fire drills, visitors and other school management practices
 - Uneven transitions between activities and inefficient classroom management procedures that disrupt the learning flow, such as disorderly material distribution or disorganized assignment collection
 - Over-reliance on seatwork, uninteresting and overly demanding lessons and other non-engaging instructional practices

Big Rock #1: Recapture Instructional and Engaged Time

9. Summary: **Educators, who are familiar with the time on-task research, know their students, use effective classroom management techniques and employ effective teaching practices** and interactive learning activities, have **the power to increase the learning of their most at-risk students**. Anita Archer has said that, **“How well we teach = how well they learn.”** Remember that it is the **quality of our teaching that is the single most important variable that we can influence** (verses curriculum, parents, etc.).

*“It’s not what you say or do that ultimately matters ...
it is what you get the students to do as a result of what you said and did that counts.”*
Kevin Feldman

References:

Dr. Kevin Feldman, “Ensuring the Literate Engagement of Every Student, Every Day, Every Lesson,” UMTSS Summer Conference, Layton, Utah (June 13, 2013)

Dr. Francis Stetson, “Closing the Knowing-Doing Gap,” UCASE, St. George, Utah (March 20, 2013)

Dr. Anita Archer & Dr. Charles Hughes, Explicit Instruction: Effective and Efficient Teaching “Time-on-Task: A Strategy that Accelerates Learning” <http://feaweb.org/time-on-task-a-teaching-strategy-that-accelerates-learning>

High School Algebra Video Clip, <http://youtu.be/h6WJdsb0dfM>

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#2 Utilize Effective Practices

Learning Pyramid

The Learning Pyramid shows the approximate retention rates of learners with a variety of learning modes. Students learn best through active participation! As special educators we need to use the most effective practices.

(See attached handout)

“Six Scaffolding Strategies to Use with Your Students” by Rebecca Albers

<http://www.edutopia.org/blog/scaffolding-lessons-six-strategies-rebecca-alber>

These strategies work to improve student learning! With any strategy, it is important to provide **ongoing, constructive and targeted feedback** to students. It’s essential to improve performance.

The Six Scaffolding Strategies Identified by Rebecca Albers

1. Show & Tell

Examples:

- Teacher models solving a math problem using think aloud
- The “I do” phase of Effective (Direct) Instruction with think aloud.

Resources:

- Think Alouds: <http://www.adlit.org/strategies/22735/>
- http://www.teachertube.com/viewVideo.php?video_id=293675
- Teaching the Think Aloud Process: <http://www.readwritethink.org/classroom-resources/lesson-plans/building-reading-comprehension-through-139.html?tab=4#tabs>

2. Tap into Prior Knowledge

Examples:

- Activate/Build Prior Knowledge
- Personalize information to show relevance to own life
- Connect materials to previously learned content
- Provide a hook

Resources:

- Marzano:
<http://valdostastatmartin.pbworks.com/w/file/fetch/51342636/Background%20Knowledge%20.pdf>
- Activate/Build Background Knowledge:
http://www.udlcenter.org/aboutudl/udlguidelines/principle1#principle1_g3_c2
<http://valdostastatmartin.pbworks.com/w/file/fetch/51342636/Background%20Knowledge%20.pdf>
<https://www.teachingchannel.org/videos/making-vocabulary-lesson-interactive>

Big Rock #2: Utilize Effective Practices**3. Give Time to Talk**

Examples:

- Think-Pair-Share
- Role Play
- Peer Coaching
- Cooperative Learning Groups
- Peer Assisted Learning Strategies (PALS)

Resources:

- http://www.teachertube.com/viewVideo.php?video_id=293675
- <http://www.youtube.com/watch?v=O5O05rO6O0Q>
- <http://serc.carleton.edu/introgeo/cooperative/whatis.html>
- <http://learningisgrowing.wordpress.com/2012/03/21/think-pair-share-variations/>
- <https://www.teachingchannel.org/videos/student-peer-teaching>
- <https://www.teachingchannel.org/videos/student-participation-strategy>
- <https://www.teachingchannel.org/videos/making-vocabulary-lesson-interactive>

4. Pre-Teach Vocabulary

Examples:

- Use explicit vocabulary instruction in academic language
- Use a systematic routine when introducing new vocabulary
 - Name/pronounce the word; state classification and characteristics
 - Act out the meaning, select a synonym, antonym, homonym, draw a picture, connection to self

Non-example:

- Only provide students with a list of vocabulary words
- Using dictionary as sole resource

Resources:

- <https://www.teachingchannel.org/videos/build-student-vocabulary>
- <https://www.teachingchannel.org/videos/teaching-hard-vocabulary-words>
- <https://www.teachingchannel.org/videos/making-vocabulary-lesson-interactive>

5. Use of Visual Aids

Examples:

- Graphic Organizer
- Word Wall
- Posters
- Visual schedule/Communication Boards
- Checklists

Resources:

- <http://www.pps.k12.or.us/departments/special-education/7630.htm>
- <http://www.hdc.lsuhsd.edu/lasard/pdf/InclusionMattersHandout.pdf>
- Word Wall: http://www.readingrockets.org/strategies/word_walls/
- Keys to Literacy: <http://www.keystoliteracy.com/resources/worksheets/>

Big Rock #2: Utilize Effective Practices**6. Pause, Ask Question, Pause, Review**

Research indicates that increasing wait time from 3 to 7 seconds results in:

- Increased length of response
- More questions from students
- More students responding
- Increased responses from struggling students
- Increased student-to-student interaction
- Increased number of speculative responses
- More complex responses
- Increased student confidence

Resources:

- <https://www.teachingchannel.org/videos/strategies-for-engaging-students>
- <http://www.ericdigests.org/1995-1/think.htm>
- <http://specialed.about.com/b/2010/11/07/teach-like-a-champion-technique-25.htm>

Just remember:

**“The Ones Doing the Doing, Are Doing the Learning!”
(Jeri Rigby, UPDC)**

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#3 Implement Effective Classroom Management Procedures

1. Setting and Teaching Expectations

Regardless of 'personal style', teachers must create a structured and consistent classroom environment.

- Teach classroom rules
- Teach classroom procedures
- Use consistent language (Precision Requests)
- Post class schedule, rules, and consequences

2. Clear Positive and Negative Consequences

Punishment STOPS behavior, but only reinforcement CHANGES behavior.

- Reinforcement must include a visual feedback component (point card, chart moves, etc.)
- Ratio of positives to negatives—6:1 minimum
- Individualized and unusual reinforcers (every kid is reinforced by *something*)
- Clear consequences for non-compliance
- All but the most severe consequences handled in the classroom
- Consistency

3. Classroom Modifications

Creating a physical classroom setting conducive to learning may mean changing old habits (again, check personal style in relation to student needs).

- Classroom organization
- Seating arrangements (e.g., kids must face forward for instruction; group instruction v. cooperative tasks)
- Room arrangement; minimized distractions

4. Collecting the Data

The teaching roadmap is comprised of behavioral and academic data.

- Easy ways to collect behavioral data
- Student self-monitoring and graphing
- Using data to plan your next move (to choose strategies, make changes to the BIP, improve instruction, etc.)

5. School-Home Connection

It is up to the school to establish school-home communication. Regardless of the response from home, the flow of information must be maintained.

- Home notes with behavior tracking
- Progress reports
- Email
- Meetings

Big Rock #3: Implement Effective Classroom Management Procedures

References

- Marzano, Robert J., Pickering, Debra J., Pollock, Jane E. (2001) *Classroom instruction that works: research-based strategies for increasing student achievement*. Alexandria, VA: ACSD Publishing
- Morgan, D.P. & Jenson, W.R. (1996), *Teaching behaviorally disordered students: preferred practices*. Columbus, OH: Merrill Publishing Company
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- Rhode, G., Jenson, W.R., & Reavis, H.K. (2002), *The tough kid tool box*. Eugene, OR: Pacific Northwest Publishing
- Sprick, Randy (2008) *CHAMPS: A proactive & positive approach to classroom management*. Eugene, OR: Pacific Northwest Publishing
- Walker, H., Colvin, J. & Ramsey, E. (1995), *Antisocial behavior in school: strategies and best practices*. Pacific Grove, CA: Brooks/Cole Publishing Company

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#4 Participate in Professional Learning Communities (PLC) and Use Data to Make Informed Decisions

*Let's put our minds together and see what life we can make for our children.”
– Sitting Bull*

Richard De Four has outlined 3 big ideas of Professional Learning Communities:

Big Idea #1: Ensuring That Students Learn

- The professional learning community model flows from the assumption that the core mission of formal education is not simply to ensure that students are taught but to ensure that they learn.
- This simple shift—from a focus on teaching to a focus on learning—has profound implications for schools.
- The three crucial questions that drive the work of those within a professional learning community are:
 - **What do we want each student to learn?**
 - **How will we know when each student has learned it?**
 - **How will we respond when a student experiences difficulty in learning?**

The answer to the third question separates learning communities from traditional schools.

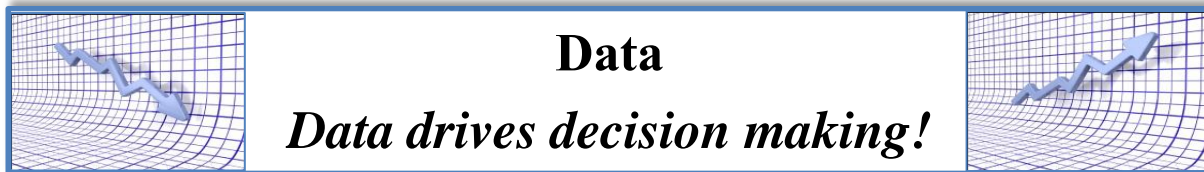
Big Idea #2: A Culture of Collaboration

- Educators in Professional learning communities work in teams, engaging in an ongoing cycle of questions that promote deep team learning. This process, in turn, leads to higher levels of student achievement.
 - “Are students learning what they need to learn?”
 - “Who needs additional time and support to learn?”
- Rather than relying solely on summative assessments, effective teams ask, “Which students learned what was intended and which students did not?”
- Collaborative conversations call on team members to make public what has traditionally been private—goals, strategies, materials, pacing, questions, concerns, and results. These discussions give every teacher someone to turn to and talk to, and they are explicitly structured to improve the classroom practice of teachers—individually and collectively.

Big Rock #4: Participate in Professional Learning Communities (PLC) and Use Data to Make Informed Decisions

Big Idea #3: A Focus on Results

- Professional learning communities judge their effectiveness on the basis of results. Working together to improve student achievement becomes the routine work of everyone in the school.
- Schools and teachers typically suffer from the DRIP syndrome—Data Rich/Information Poor. The results-oriented professional learning community not only welcomes data but also turns data into useful and relevant information for staff.
- Successful PLC teams ask:
“Have we made progress on the goals that are most important to us?”
- The PLC process must move beyond simply talking about various forms of student data; brainstorming possible teaching strategies and the like, to concretely demonstrating/observing/modeling the actual teaching that is producing the data being discussed. This “actionable feedback” provides the context for developing the reflective practice essential to instructional improvement. Connecting the dots, one could say, between our teaching and student learning...or connecting the “talk to the walk.” (Elmore, Richard, *A Key to High Performing PLCs: Connecting the “Talk to the Walk”*)



Why is Data Important?

- It is effective in improving student achievement.
- It gives students access to their data.
- Technology provides easy access to data and eases data analysis.
- Accountability requires that schools and districts measure effectiveness.
- It provides parents with evidence of student progress.
- It encourages self-reflection for students, teachers and teams.
- It identifies specific learning gaps.
- Easy access to data allows more time for planning quality instruction.
- It facilitates collaboration.
- Data is critical to continuous improvement.



Process for Using Data

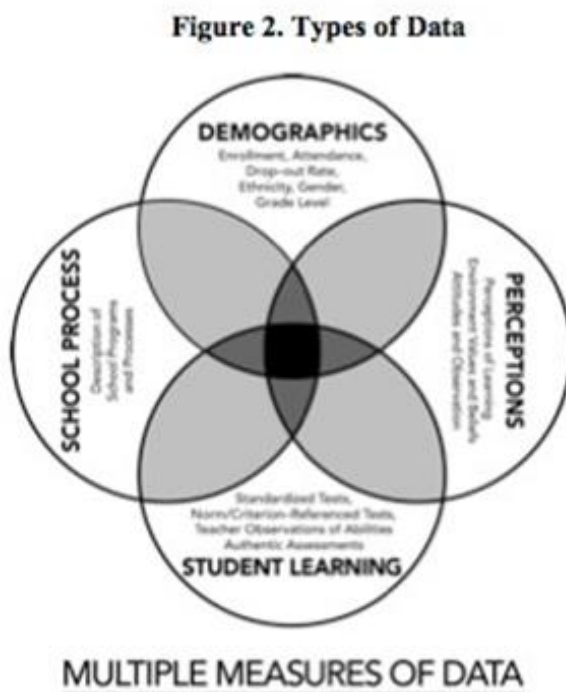
- Plan: Develop a plan for improvement.
- Do: Implement the plan.
- Study: Evaluate the impact according to specific criteria.
- Act: Adjust strategies to better meet criteria.

Big Rock #4: Participate in Professional Learning Communities (PLC) and Use Data to Make Informed Decisions

Benefits of Using Data to Drive Decision Making

- Meetings become focused on improvement strategies that address documented problems and needs.
- Goal-setting is based on the data.
- Allows for regular communication with parents regarding the progress of their student.
- Results in grading systems based on common student performance criteria that report progress on the standards as well as work skills.

Types of Data – *Collecting data should be a planned, purposeful process.*



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- **Student learning** (not just standardized tests): Use on-going assessments, observations, periodic assessments, annual assessments, etc.

▪ PALS	▪ Dibels
▪ SRI	▪ Six Minute Solutions
▪ CRT	▪ Benchmarks
▪ SAT	▪ CBAs
▪ Explore	▪ Lexile Scores
▪ Fountas & Pinnel	▪ CBMs
▪ My Access	▪ Observations

Big Rock #4: Participate in Professional Learning Communities (PLC) and Use Data to Make Informed Decisions

Types of Data – *Collecting data should be a planned, purposeful process.*



Guiding Questions for Collecting Achievement Data

- What evidence can we collect about our students' learning?
 - What evidence do we have that shows the knowledge, skills, and understandings our students have achieved?
 - Which data indicate the degree to which our students show the conceptual understandings and generalizations in our standards?
 - What evidence shows which students are meeting or exceeding our achievement expectations and which are not?
 - What do we know about how each individual student learns?
-
- ***Demographic Data:*** Collect data that shows student's gender, ethnicity, economic status, attendance, suspensions, mobility patterns, transportation needs, special programs, parent involvement. Look at what trends you are seeing with students and factors that may be influencing them.
 - Attendance records
 - Behavior logs
 - School path
 - ESL
 - ***School Process Data:*** Look at what programs the student is involved in. How successful is the program for your particular student?
 - Courses of study
 - SEOP
 - Extra-curricular activities
 - Community involvement
 - Individual strengths/needs
 - ***Perception Data:*** What are the belief systems of the parents and the student regarding learning and education?

Using Data to Plan – *What outcome of improvement will we set for our student?*

- **Develop goals**
 - Focused and clearly stated
 - Based on the data
 - Substantive and few in number
 - Measurable
 - Sustainable and systematic
 - Meet the student's needs
 - Attainable

Big Rock #4: Participate in Professional Learning Communities (PLC) and Use Data to Make Informed Decisions

Hard Work and Commitment

Even the grandest design eventually translates into hard work. The professional learning community model is a grand design— It requires the school staff to focus on learning rather than teaching, work collaboratively on matters related to learning, and hold itself accountable for the kind of results that fuel continual improvement.

Educators in a PLC assess their efforts on the basis of tangible results. They are hungry for evidence of student learning and use that evidence to inform and improve their practice.

The rise or fall of the professional learning community concept depends not on the merits of the concept itself, but on the most important element in the improvement of any school—the commitment and persistence of the educators within it.

-Richard DeFour, Learning By Doing, 2006



Cultural Shifts in a Professional Learning Community

A Shift in Fundamental Purpose

From a focus on teaching . . .	to a focus on learning
From emphasis on what was taught . . .	to a fixation on what students learned
From coverage of content . . .	to demonstration of proficiency
From providing individual teachers with curriculum documents such as state standards and curriculum guides . . .	to engaging collaborative teams in building shared knowledge regarding essential curriculum

A Shift in Use of Assessments

From infrequent summative assessments . . .	to frequent common formative assessments
From assessments to determine which students failed to learn by the deadline . . .	to assessments to identify students who need additional time and support
From assessments used to reward and punish students . . .	to assessments used to inform and motivate students
From assessing many things infrequently . . .	to assessing a few things frequently
From individual teacher assessments . . .	to assessments developed jointly by collaborative teams
From each teacher determining the criteria to be used in assessing student work . . .	to collaborative teams clarifying the criteria and ensuring consistency among team members when assessing student work
From an over-reliance on one kind of assessment . . .	to balanced assessments
From focusing on average scores . . .	to monitoring each student's proficiency in every essential skill

A Shift in the Response When Students Don't Learn

From individual teachers determining the appropriate response . . .	to a systematic response that ensures support for every student
From fixed time and support for learning . . .	to time and support for learning as variables
From remediation . . .	to intervention
From invitational support outside of the school day . . .	to directed (that is, required) support occurring during the school day
From one opportunity to demonstrate learning . . .	to multiple opportunities to demonstrate learning

A Shift in the Work of Teachers	
From Isolation . . .	to a focus on learning
From each teacher clarifying what students must learn . . .	to collaborative teams building shared knowledge and understanding about essential learning
From each teacher assigning priority to different learning standards . . .	to collaborative teams establishing the priority of respective learning standards
From each teacher determining the pacing of the curriculum . . .	to collaborative teams of teachers agreeing on common pacing
From individual teachers attempting to discover ways to improve results . . .	to collaborative teams of teachers helping each other improve
From privatization of practice . . .	to open sharing of practice
From decisions made on the basis of individual preferences . . .	to decisions made collectively by building shared knowledge of best practice
From "collaboration lite" on matters unrelated to student achievement . . .	to collaboration explicitly focused on issues and questions that most impact student achievement
From an assumption that these are "my kids, those are your kids". . .	to an assumption that these are "our kids"
A Shift in Focus	
From an external focus on issues outside of the school . . .	to an internal focus on steps the staff can take to improve the school
From a focus on inputs . . .	to a focus on results
From goals related to completion of project and activities . . .	to SMART goals demanding evidence of student learning
From teachers gathering data from their individually constructed tests in order to assign grades . . .	to collaborative teams acquiring information from common assessments in order to (1) inform their individual and collective practice and (2) respond to students who need additional time and support

A Shift in School Culture

From Independence . . .	to Interdependence
From a language of complaint . . .	to a language of commitment
From long-term strategic planning . . .	to planning for short-term wins
From Infrequent generic recognition . . .	to frequent specific recognition and a culture of celebration that creates many winners

A Shift in Professional Development

From external training (workshops and courses) . . .	to job-embedded learning
From the expectation that learning occurs infrequently (on the few days devoted to professional development) . . .	to an expectation that learning is ongoing and occurs as part of routine work practice
From presentations to entire faculties . . .	to team-based action research
From learning by listening . . .	to learning by doing
From learning individually through courses and workshops . . .	to learning collectively by working together
From assessing impact on the basis of teacher satisfaction ("did you like it?") . . .	to assessing impact on the basis of evidence of improved student learning
From short-term exposure to multiple concepts and practices . . .	to sustained commitment to limited focused initiatives

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#5 Engage in the Practice of Self-Reflection in Teaching Practice

“A reflective approach to teaching is one in which teachers collect data about teaching, examine their attitudes, beliefs, assumptions and teaching practices, and use the information obtained as a basis for critical reflection about teaching.” (Richards & Lockhart, 1994)

1) Educators Benefit from Reflective Practices

- Research and educational professional literature support the idea that reflection can play an important role in helping teachers improve their inclusive practices.
- Expert teachers are able to adjust their thinking to accommodate the level of reflection a situation calls for in order for more successful outcomes to occur.
- Teachers who have the ability to reflect on their teaching practice know not only what to do to better meet the needs of their students, but also why it needs to be done.
- Research substantiates the role of reflection in teachers’ professional growth.

2) Three Levels of Reflection (Knight, 2011)

- **“Looking Back”** – reflection on something after it has happened and considering what went well and what needs to be done differently next time.
 - *“Did I provide enough concrete examples using manipulatives to help my students understand the concept?”*
- **“Looking At”** – is being aware of what is going on while in the moment and making adjustments as needed.
 - *“Hmmm, I think my student does not have the verbal ability to respond/participate in this learning activity. I need to grab an augmentative device and provide another opportunity for him to participate.”*
- **“Looking Ahead”** – requires thinking about how to use an idea, practice, or planning in the future.
 - *“How can I use the recording option in our presentation software to make the lesson on fractions clearer?”*

Big Rock #5: Engage in the Practice of Self-Reflection in Teaching Practice**3) Beginning the Process of Reflection (Tice, 2004)**

You may begin a process of reflection in response to a particular problem that has arisen with one of your classes, or simply as a way of finding out more about teaching. You may decide to focus on a particular class of students, or to look at a feature of your teaching.

Effective Reflection Methods	
Teacher Diary	This is the easiest way to begin a process of reflection since it is purely personal. You will describe your own reactions and feelings and those you observed on the part of the students. You are likely to begin to pose questions about what you have observed. Diary writing does require a certain amount of discipline. You will need to take the time to write in and reflect in your diary on regular basis.
Peer Observation	Invite a colleague to come into your class to collect information about your lesson. This may be a simple observation. This process will yield information on your specific strengths and weaknesses. Example: You may ask your colleague to focus on which students contribute most in the lesson, what different patterns of interaction occur or how you deal with errors.
Recording Lessons	<p>Video or audio recordings of lessons provide very useful information for reflection. You may do things in class you are not aware of, or there may be things happening in the class that as the teacher you do not normally see.</p> <p>Audio recordings can be useful for considering aspects of teacher talk.</p> <ul style="list-style-type: none"> • How much do you talk? • What about? • Are instruction and explanations clear? • How much time do you allocate to student talk? • How much time do you allocate for student participation? • How do you respond to student participation? <p>Video recordings can be useful in showing you aspects of your own behavior.</p> <ul style="list-style-type: none"> • Where do you stand? • How do you use teaching materials/technology? • Who do you speak to? • How do you come across to the students?
Student Feedback	Ask your students to reflect on how they view the classroom. Their opinions and perceptions can add a different and valuable perspective. This can be done with simple questionnaires or learning diaries. Using student data can be a reflection tool to demonstrate student learning.

Big Rock #5: Engage in the Practice of Self-Reflection in Teaching Practice**4) Reflection Requires Specific Thinking Modes (Tice 2004, Danielson 2009)**

The use of four different modes of thinking enhances teachers' reflective practice:

Think

This type of thinking relies on sources that are proven efficient and effective practices. You may notice patterns occurring in your teaching through observation when using these sources.

Example: Using the Core Curriculum when writing IEP goals.

Technological (or Formulaic)

Talk

This type of thinking requires focus only on information embedded in a specific context at a specific time. As a teacher, you will develop more effective teaching strategies when you talk about what you have discovered during the observation to a supportive colleague or friend. Example: After consulting with a colleague, the teacher develops a strategy to intervene with a student's off-task behavior using direct eye contact and statement to focus on their work.

Situational Thinking

Read

This type of thinking is a deliberate process to gain understanding of a situation and generate solutions. You may discover that through your observation, additional information is needed in a certain content area. Resources would include websites, professional journals, magazines, books, etc. This type of thinking requires the teacher to have the ability to suspend judgment as though they are seeing their teaching for the first time. Example: A teacher would video a teaching session and after reviewing the video, the teacher realizes that she had not been defining key vocabulary words in the steps of a process.

Deliberate Thinking

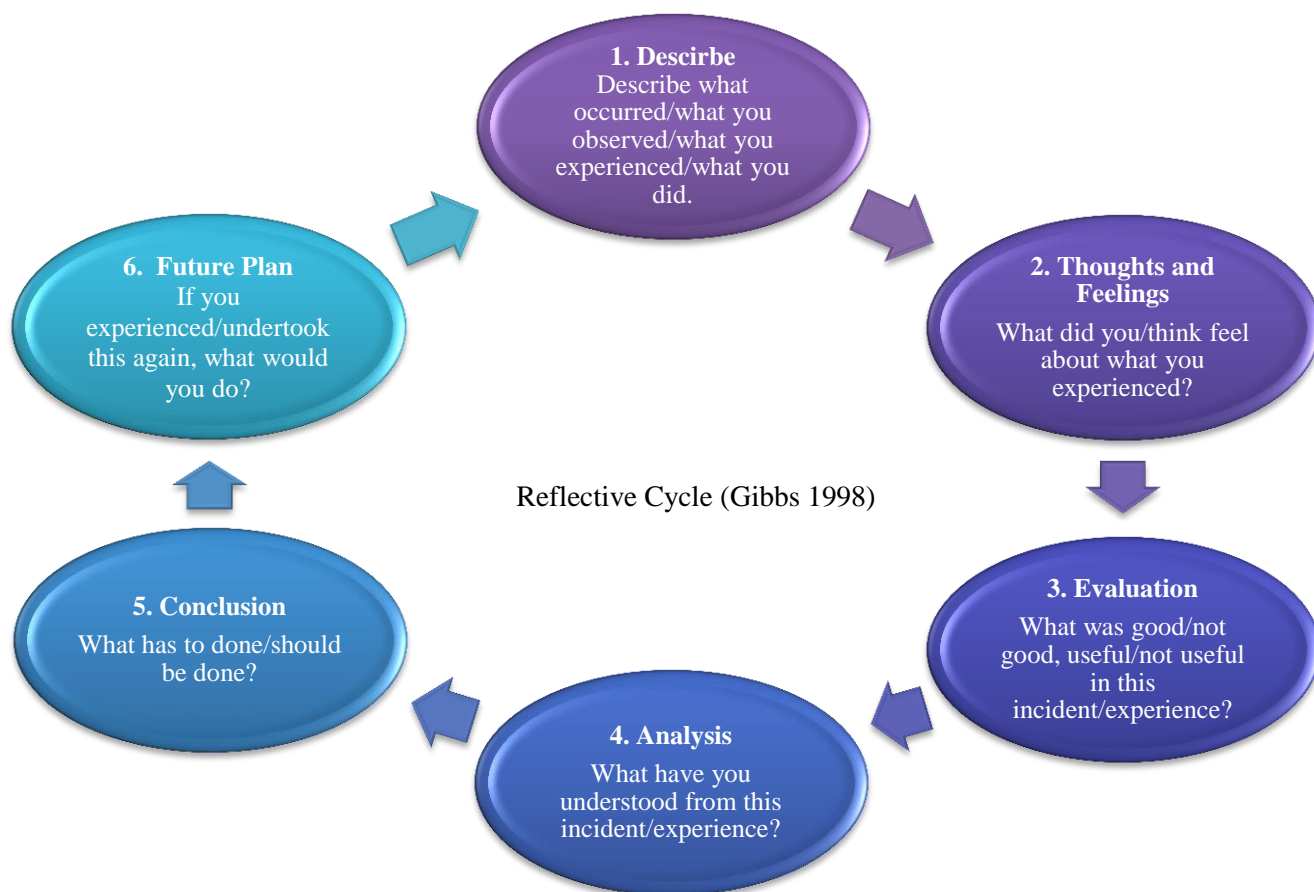
Ask

This type of thinking requires more information than the immediate context provides. Asking questions and seeking answers/solutions through collaboration with peers, administrators, specialists, parents, and in-service trainers promotes successful problem solving. Example: After reviewing reading data for a group of students, you collaborate with a colleague to determine new strategies to use during teaching sessions.

Dialectical Thinking

Big Rock #5: Engage in the Practice of Self-Reflection in Teaching Practice

Reflective teaching is a cyclical process, because once you start to implement changes, then the reflective cycle begins again. (Tice 2004)

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