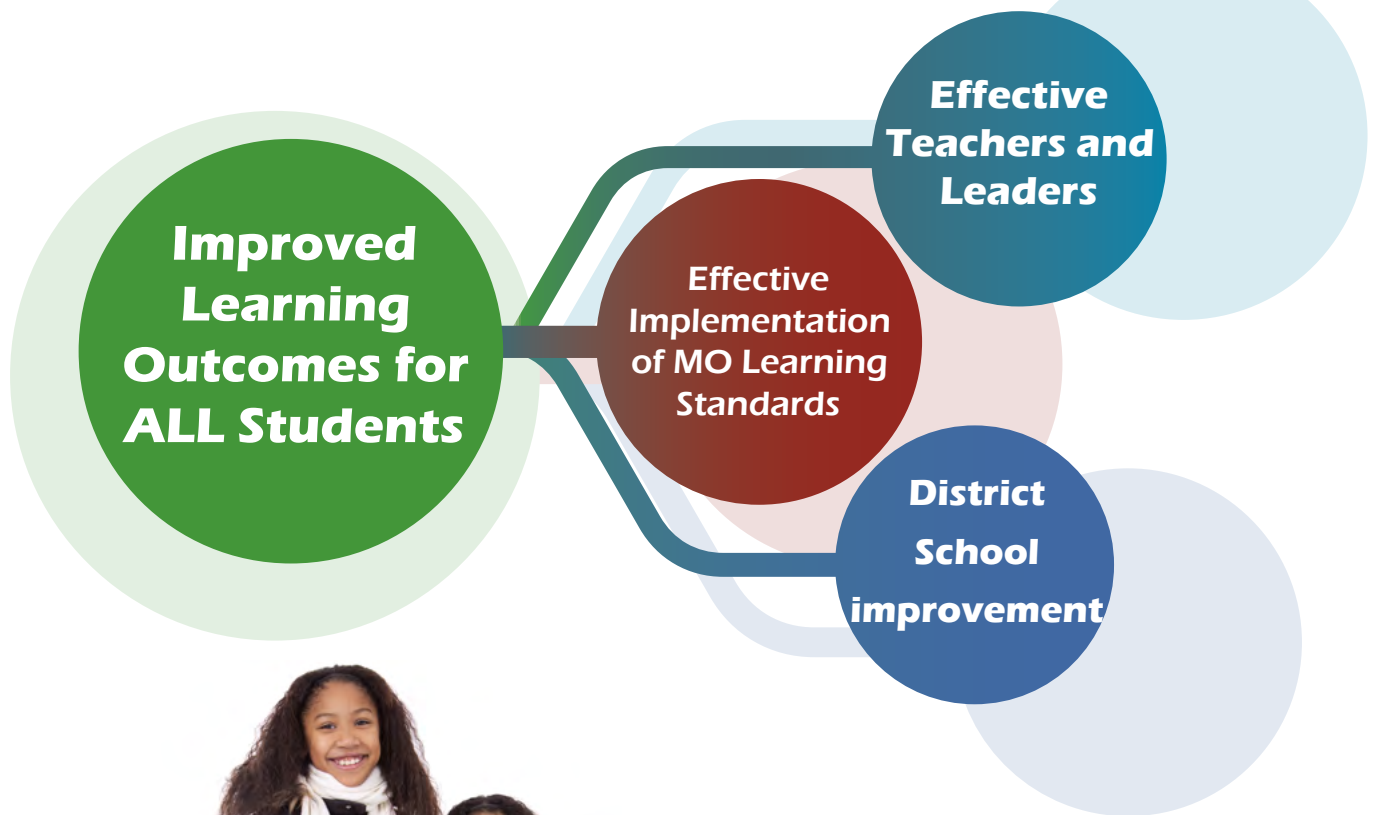


# Missouri Collaborative Work

Improved Learning Outcomes for **ALL** Students



## Focus of MO Collaborative Work

- Collaborative data teams
- Teaching and learning practices
- Common formative assessments
- Data-based decision-making
- Implementation coaching

*Winter Edition  
January 2016*



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# Background

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Through the Missouri State Personnel Development Grant (SPDG), a framework of high quality professional development has been designed. This framework includes critical elements for developing professional development content as well as supporting implementation with fidelity. The professional development content focuses on collaborative data teams, data-based decision-making, common formative assessment, and effective teaching and learning practices at the classroom level. The benefit has been a consistent approach to moving the statewide system of support towards improving the quality of professional development provided to schools showing a need to improve student achievement, in particular for students with disabilities.

## Development of HQPD - *It Takes a Village* (aka Statewide Coordinated Network)

The Professional Development Learning Packages are developed collaboratively by the network of Missouri Regional Professional Development Centers (RPDCs). Content experts within the RPDCs provide leadership for developing professional development content focused on selected, effective teaching and learning practices. Prior to rolling-out for use with Collaborative Work educators, each learning package undergoes a formalized peer review and vetting process.

As we continue to learn from “what works” and “what doesn’t work” we will continue to revise and expand the framework and content.

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*Excellent depth. Very thorough support materials.*

*Great use of expertise throughout the state. High level of content, processes, delivery. Great organization of training!*

*-RPDC Consultant in reaction to the Roll-Out of the Learning Packages (July 2013)*

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# About

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## With a goal of **improved outcomes for all Missouri students**

Through **collaborative data teams**, teachers and administrators assist one another to:

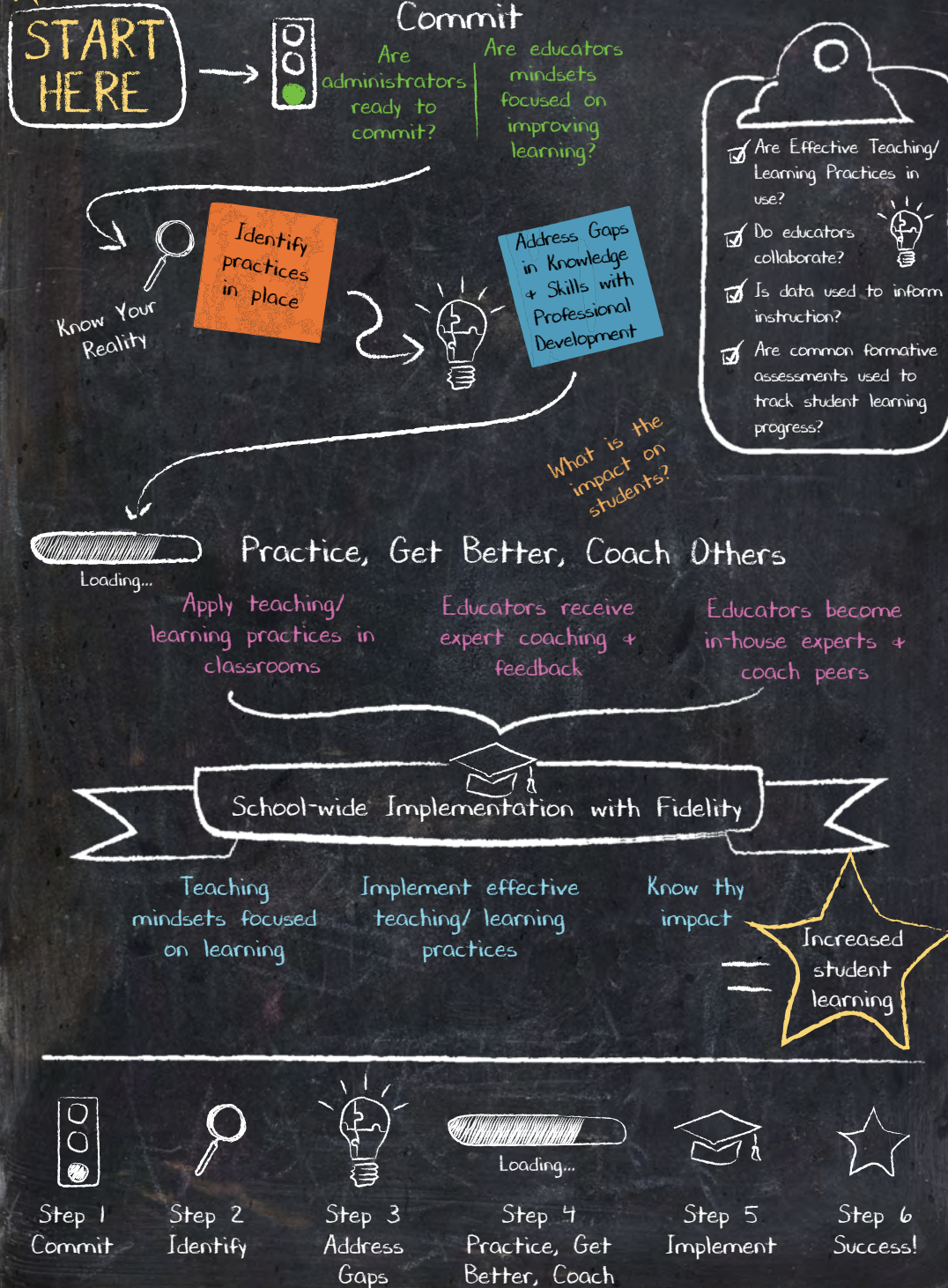
- implement **effective teaching and learning practices**,
- develop and administer **common formative assessments** that measure the effectiveness of instruction and student mastery of learning objectives, and;
- use **data-based decision-making** to guide team decisions about classroom learning and instruction.

Since 2012, over 350 Missouri school buildings have participated in the Collaborative Work initiative.





# ★ Journey of a Collaborative Work School



# About

## Educator Beliefs of Effective Teaching and Learning Practices

At the heart of teaching and learning are the beliefs, dispositions and attitudes that teachers hold regarding students, curriculum and the daily life of the classroom. Educator beliefs are highly influential on student success, as such beliefs guide teacher decision-making and instructional processes. It is believed that educators who possess particular teacher beliefs are high-impact educators who create ideal learning environments for all students—especially diverse learners. The work of John Hattie (Hattie, 2009; Hattie & Yates, 2014) influenced the adoption of the following 8 essential educator beliefs:

**"I believe that my fundamental task is to reflectively evaluate the effectiveness of my teaching and learning on student learning and achievement success."**

Teachers must evaluate themselves as well as students, look at learning through the eyes of students to determine the impact.



**Belief  
in  
Self-Reflection**

"How do I know that my teaching approach is working?"

"Do I share a common conception of progress with other teachers?"

**"I believe, as a change agent for improved teaching and learning, that I am responsible for student successes and failures."**

As change agents, teachers provide scaffolding, feedback, and guidance to help students understand and learn.



**Belief in  
Teacher-As-  
Change-Agent**

"All students can be challenged."

"It's all about strategies, never styles."

"It is important to encourage help-seeking behaviors."

**"I believe in deeply thinking about and identifying the learning processes of all students to inform my teaching practices."**

Teachers must be "adaptive learning experts" able to teach in multiple ways and model different ways of learning.



**Belief in Multiple  
Ways of Learning  
& Knowing**

"In what ways do students learn differently?"

How can I best support the differences?"

**"I believe student assessment provides me with valuable feedback about my teaching."**

Colleagues can provide feedback. Like students, teachers need to know where they are going, how they will get there, and where they will go next.



**Belief in  
Meaningful  
Assessment**

"Who and what did I teach well and who not so well?"

"Where are the gaps and strengths, what was achieved and what has still to be achieved?"





**"I believe students should be engaged in most of the talking and I should be engaged in most of the listening."**

All students benefit from dialogue, rather than monologue. Students need the opportunity to ask questions and clear up these misconceptions.



**Belief in  
Reciprocal  
Dialogue**

"Do I truly listen to my students' questions, ideas, struggles, strategies of learning, successes, interaction with peers, outputs, and views about teaching?"

**"I believe in providing a challenging curriculum where I hold and support high expectations for all students."**

Teachers plan how to engage students in the challenge of learning and go beyond just breaking a challenge into manageable bits.



**Belief in  
Challenging  
Curriculum**

"Do I engage students in the challenge of learning?"

"Can students see the purposes of the challenges that are so critical to learning success?"

**"I believe I am responsible for facilitating positive relationships with students, staff and families, which are essential to effective teaching and learning processes."**

Teacher need to have a positive interpersonal relationship with each student, and students need to feel the classroom environment is trustworthy, fair, and empathetic.



**Belief in  
Positive  
Relationships**

"How can I create a high level of trust in the classroom?"

"Do my students feel safe to readily indicate that they do not understand?"

**"I believe that as I partner with parents, I must explicitly inform parents of the 'language of learning' to ensure their success in navigating school expectations."**

When parents understand the language of learning, they are better equipped to help their children.



**Belief in  
Teacher-Parent  
Partnerships**

"How can I support parents to help their children attend and engage in learning?"

"Do parents understand learning rationale and success criteria?"



# About

## Professional Development | Collaborative Work

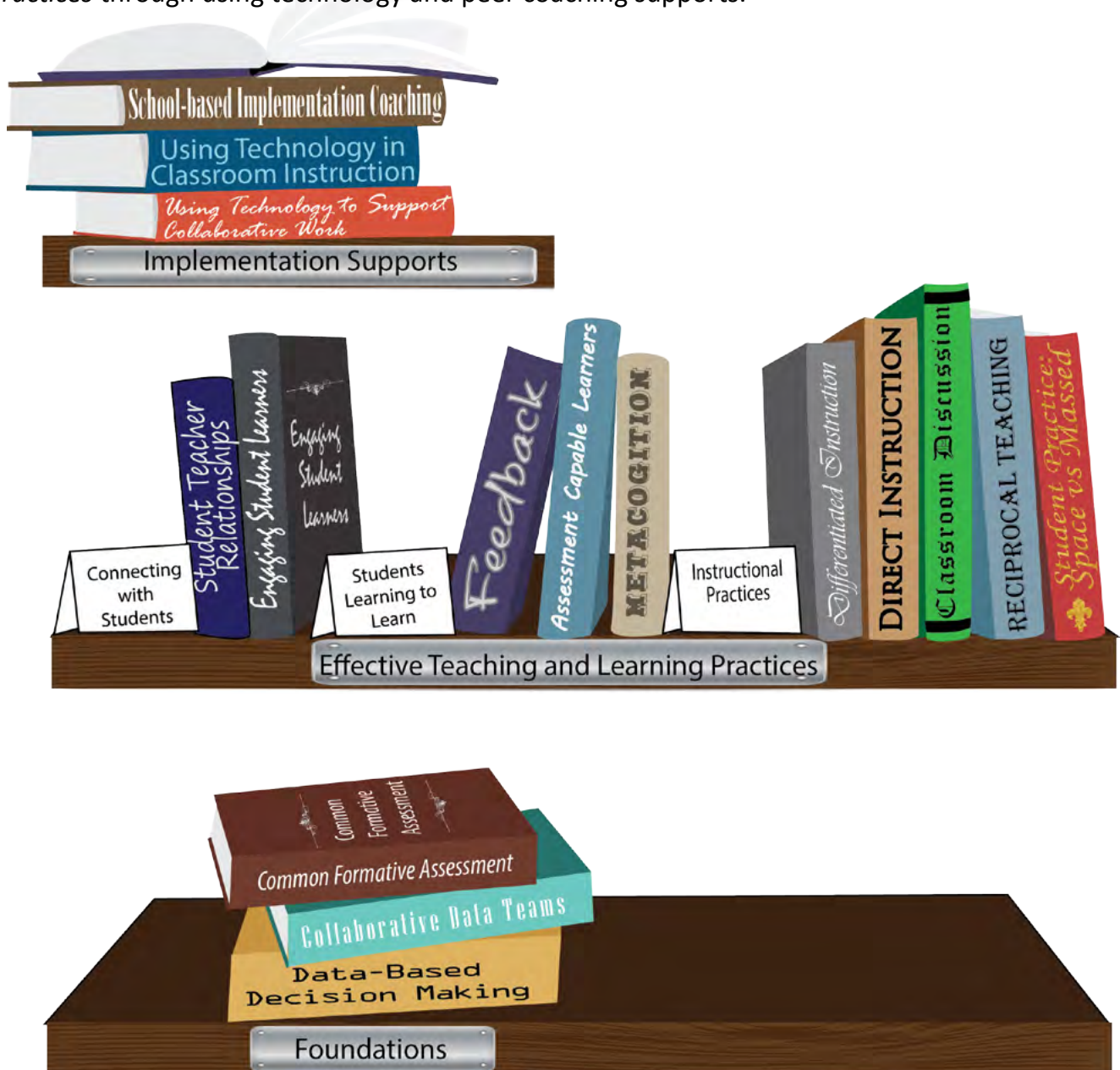
Missouri professional development in *Teaching & Learning for Effective Practices* is comprised of purposefully designed professional development content and processes aligned with the research on student and adult learning. We understand that conventional forms of professional development (i.e., one-shot workshops and conferences) do not provide the support needed to modify teaching practices.<sup>1</sup> Effective professional development needs to be authentic and ongoing.<sup>2</sup> Furthermore, professional development should address adult learning methods to ensure effectiveness through levels of instruction (i.e., introduce, illustrate, practice, evaluate, reflect, and master).<sup>3</sup> A 'learning package' is a focused approach to professional development content that (a) addresses adult learning principles and (b) upholds specific characteristics of high quality professional development, and focuses on implementation at the classroom level.

### Learning Package Components

Component	Purpose	Examples of Content
Preparation	Provide opportunity for learners to engage in the content prior to the formal training.	Learning objectives Expectations for the training Preparatory reading Reflection exercise
Opening & introductions	Provide an overview of the day, including reviewing learner objectives, outcomes, and essential questions.	Session at-a-glance Introductions Essential questions Norms Pre-assessment
Why the topic is important	Review the basics and relevance to student learning.	Implications for student learning Ways implementation aligns with MO Learning Standards
Overview of the topic	Provide learner with core concepts, terms, and vision for implementation.	Core concepts Glossary of terms Implementation example
Unpacking the topic	Explore the core components and implementation steps.	Detailed description of the core components Rationale for components Detailed implementation steps
Topic in practice	Provide opportunity for learners to discuss what application in the classroom looks like.	Detailed description of what implementation looks like Group discussion on what implementation looks like in a variety of contexts Measuring fidelity Using data to inform practice
Topic in action	Explore ways for the learners to incorporate the new knowledge and skills into their teaching.	Reflection on what implementation would look like in their classrooms Discuss and problem-solve potential challenges to implementation and fidelity drift
Assessment & reflection	Provide opportunity for the learners to reflect on their learning and potential implementation challenges.	Post-assessment learner knowledge Reflect on personal teaching context and implementation
Closing & follow-up	Provide opportunity for learner to outline their implementation steps and plans for follow-up coaching.	Template for outlining implementation steps in personal teaching contexts and follow-up coaching Additional resources for further learning

<sup>1</sup>Asayesh, 1993; Guskey & Huberman, 1995; <sup>2</sup> Boudah, Blair & Mitchell, 2003; <sup>3</sup> Trivette, Dunst, Hamby & O'Herin, 2009

Missouri's professional development learning packages are organized in three categories: *Foundations*, *Effective Teaching & Learning Practices*, and *Implementation Supports*. All schools begin their professional development journey with the Foundations, as these learning packages provide foundational knowledge in three key areas: Collaborative Data Teams, Data-based Decision-making, and Common Formative Assessment. *Effective Teaching & Learning Practices* encompass research-based instructional practices for deepened learning. These learning packages address ways of connecting with students, ways of helping students learn how to learn, and feature specific instructional practices. *Implementation Supports* are learning packages designed to help school staff support and enhance the implementation of *Effective Teaching & Learning Practices* through using technology and peer coaching supports.



# About

## Infographics | Essential Resources

### Infographics

Infographics can be a valuable communication tool. As a visual representation of data or information, infographics can effectively tell a story, illustrate implementation, and highlight data to emphasize key points.

### Why are infographics effective?

- 1. Short Attention Spans.** Information is on-demand and instant access to information is expected. Infographics help focus on important pieces of information to easily get the learner started.
- 2. Information Overload.** There is a constant flow of information through the internet and our on-the-go access through smartphones, tablets, and computers. We continuously receive, analyze, share, and create new information. A visualization that effectively combines the right text with the right data is compelling and helps us focus on important information.
- 3. Easy to Understand.** Infographics have potential to make complex information easier to understand. For learners who tend to more quickly interpret visual information, infographics can be very powerful.
- 4. Making facts easy to remember.** The visualization of information helps learners retain information. By pairing graphics, pictures, and data, the text is made more memorable.
- 5. More Engaging.** Infographics can offer a more engaging way to access information. With visual interest, the information is more likely to be read, discussed, and shared.

### How to use infographics

Infographics can be used to introduce learners to the topic. Each infographic gives rationale for why the practice is important and describes implementation of the practice. The infographics can also be used to assist a learner with revisiting the practice.

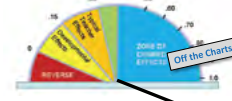
#### Assessment Capable Learners

Who are Assessment Capable Learners?

- Students who:
- know the learning target for the lesson
  - can describe where they are in relation to the criteria
  - use that information to select learning strategies to improve their work



Effect Size: 1.44 (effect size)



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#### Benefits

When students self-assess regularly, track and share their progress, their confidence as learners grows. Their motivation to do well increases as does their achievement.

Stiggins & Chappuis 2010



#### Closing the Gap

- Students engage in reflective review (**revise**)
- Students can be encouraged to set questions and create solutions (**refine**)
- Students apply scoring criteria through peer assessment and self-assessment (**rewrite**)

#### Metacognition

What is Metacognition?

- Awareness of one's own actions and their effects
- Posing internal questions to find information and meaning
- Developing mental maps, pictures, or plans
- Monitoring plans throughout a process and revising plans when they do not work
- Self-evaluating a completed plan

Costa 2008



Effect Size: .69

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#### Thinking about our thinking:

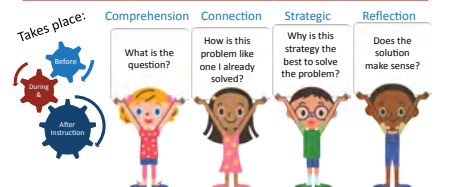


#### Impact of Metacognition

- Shapes active rather than passive learners
- Gives students a sense of control over learning
- Promotes "deep learning"
- Makes students aware of their own thinking

McElwee 2009

#### Four Types of Self-addressed Metacognitive Questions



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#### Coaching is a process!

How Coaching Works?

Because we value outcomes, 80% or more of the time spent on performance support should be devoted to "coaching" practitioners how to do the intervention, better and better over time.

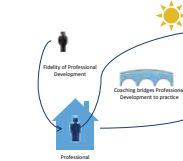
Karen Wise and Dawn Friesen, University of North Carolina - Chapel Hill

#### When is Coaching Needed?

1. When learning for the first time
2. When wanting to learn more
3. When trying to remember and/or apply
4. When things change
5. When something goes wrong

The Five Moments of Need (Dr. Conrad Gottfriedson 2010)

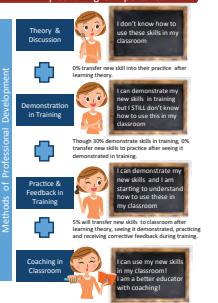
#### Who Needs Coaching?



Coaching for Better Instruction = Improved Outcomes

MO EDC SAIL UNAC PHAROS EDUCATION

#### Why Coaching is Important?



After coaching coaching in the classroom, 90-95% were able to demonstrate knowledge, and skill and use those skills in their classrooms. (Holt & Kohnert)

MO EDC SAIL UNAC PHAROS EDUCATION

## Practice Profiles

Implementation with fidelity requires clearly described implementation criteria. The practice profile framework has recently been developed by the National Implementation Research Network (NIRN) as a way of outlining implementation criteria using a rubric structure with clearly defined practice-level characteristics (NIRN, 2011).

### Why are practice profiles effective?

Practice profiles describe the essential functions and level of implementation. The template uses four implementation levels for each essential function. The rubric format gives examples of what expected implementation looks like as well as emerging or growing levels of implementation.

The professional development provider should walk through the practice profile with the leaders-educators-learners. It is an important tool for self-monitoring because it serves as a reminder of implementation criteria and is aligned with the fidelity checklists.

**Missouri Collaborative Work Practice Profile**  
Foundations present in the implementation of each essential function. Contribute to the success of all students and to improving the quality of instruction.

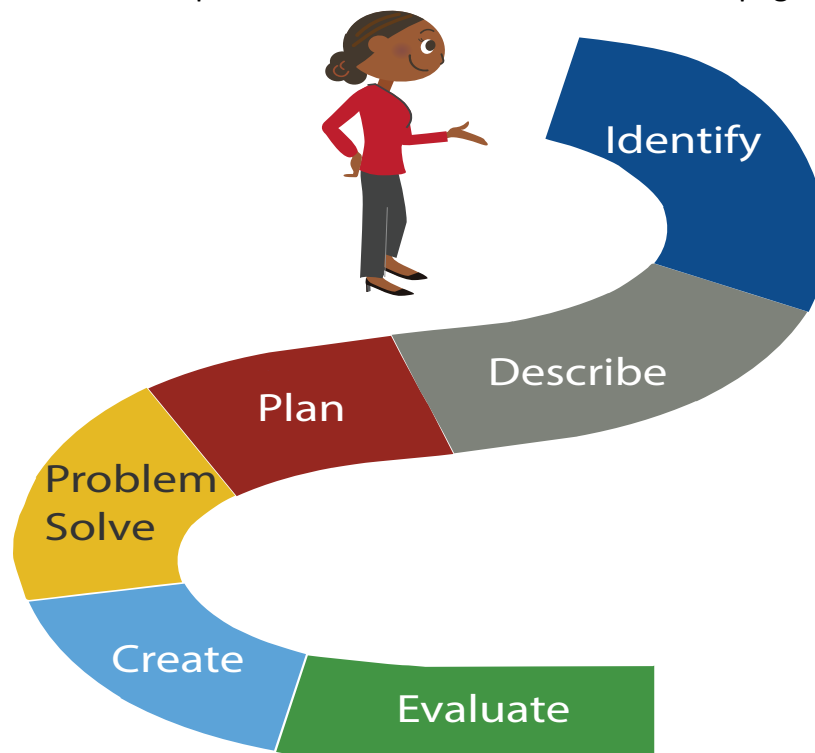
**Assessment Capable Learners Practice Profile**

Essential Function	Exemplary proficiency Most Implementation	Proficient	Close to Proficient (Skill is emerging, but not yet to Exemplary proficiency) Coaching is recommended	Far from Proficient (Follow-up professional development and coaching is critical)
1 Educators teach students to determine, "Where am I going?"	When teaching students to develop learning goals, all of the following criteria are met 80% of the time: • Educator writes targets using student-friendly language. • Educator models asking "I see _____," or "I know _____," statements. • Educator develops a plan with students. • Educator analyzes student work with the students using exemplary and non-exemplary examples.	When teaching students to develop learning goals, all of the exemplary criteria occur, but <80% of the time.	When teaching students to develop learning goals, some of exemplary criteria occur.	When teaching students to develop learning goals, none of exemplary criteria occur.
2 Educators teach students to determine, "Where am I now?"	When teaching students to self-evaluate learning progress, all of the following criteria occur 80% of the time: • Educator provides descriptive feedback. • Educator asks students to assess their own progress by asking themselves some key questions about where they are in their learning. • Educators instruct students to self-assess, justify, and set goals.	When teaching students to self-evaluate learning progress, all of the exemplary criteria occur, but <80% of the time.	When teaching students to self-evaluate learning progress, some of exemplary criteria occur.	When teaching students to self-evaluate learning progress, none of exemplary criteria occur.
3 Educators teach students to determine, "How can I close the gap?"	When teaching students to identify next learning steps, all of the following criteria occur 80% of the time: • Educator assesses the students in determining what might be some of the next instructional steps. • Educator teaches the students to self-reflect, document, and share their learning.	When teaching students to identify next learning steps, all of the exemplary criteria occur, but <80% of the time.	When teaching students to identify next learning steps, some of exemplary criteria occur.	When teaching students to identify next learning steps, none of exemplary criteria occur.

Excerpted: Assessment Capable Learners Fidelity Checklist, lesson plans

## Implementation Plans

School-wide implementation with fidelity is essential for achieving intended outcomes. Throughout the collaborative process are data-driven elements. See page 40 for getting started.





# Collaborative Data Teams

## Foundation

# Collaborative Data Teams

## Why Collaborate?

*"Quality teaching is not an individual accomplishment, it is a result of a collaborative culture that empowers teachers to team up to improve student learning beyond what any one of them can achieve alone."*

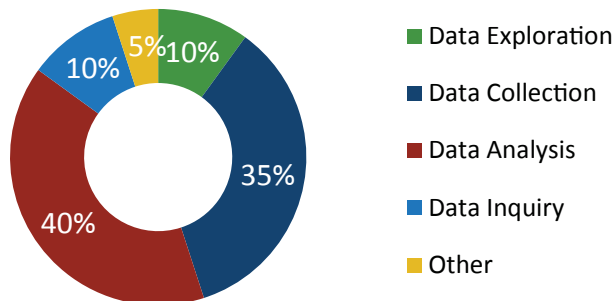
(Carroll, 2009, p. 13)

*"...the most significant result was an increase in teacher morale and motivation."*

(Hord, 2008)

## The Research

Collaborative Data Teams set the stage for data inquiry; without it teams tend to focus on...



Collaborative teams need to shift their focus from looking at student work to looking at student thinking, spending more time on data inquiry.

(Slavit, Nelson, and Deuel, June 2012)

## The Big Idea!

### The Process

High functioning Collaborative Data Teams use data to address these 3 questions:

- ☐ What is it we want students to learn?
- ☐ How will we know when each student has learned it?
- ☐ How can we improve on current levels of student achievement? (DuFour, R. 2004)

To improve outcomes for all students, educators need to know:

### THE WHY...

To improve future student outcomes by becoming more skilled educators.

### THE HOW...

Educators effectively utilize team processes. Team processes are critical!



### THE WHAT...

Educators intentionally collaborate about the most effective practices within curriculum, instruction, assessment, and school climate.



## Essential Functions

- Educators collaboratively develop common purposes and goals for improved student outcomes within a culture that embraces continuous school improvement.
- Educators effectively implement group processes (agendas, minutes, dialogue, and discussion, norms, logistics, consensus, roles, decision-making skills, protocols.)
- Educators intentionally collaborate about the most effective practices within curriculum, instruction, assessment and climate.

## Learning Package Components

- Overview & purpose of collaborative data teams
- Foundational collaborative processes
  - Agendas
  - Communication
  - Norms
  - Roles
- Advanced collaborative processes
  - Consensus
  - Collaborative Skills
  - Protocols



# Data-Based Decision-Making

## Foundation

# Data-Based Decision-Making

## Definition

### Using Student Data to Support Instructional Decision-Making

Data-Based Decision-Making (DBDM) = small teams meet regularly and use an explicit, data-driven structure to:

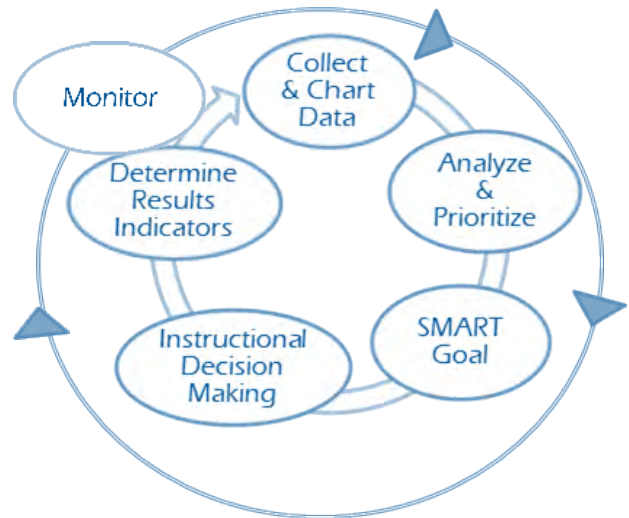
- ☐ disaggregate data,
- ☐ analyze student performance,
- ☐ set incremental student learning goals,
- ☐ engage in dialogue around explicit and deliberate classroom instruction, and
- ☐ create a plan to monitor instruction and student learning.

## Purpose

- ☐ Make data part of an ongoing cycle of instructional improvement
- ☐ Teach students to examine their own data and learning goals
- ☐ Establish a clear vision for school-wide data use
- ☐ Provide supports that foster a data-driven culture within the school
- ☐ Develop & maintain a district-wide data system



## The Process



## Benefits

Using a DBDM process shifts the work of school leadership teams from a reactive or crisis driven process to a pro-active, outcomes driven process, and sets the stage for continuous improvement.

Gilbert, 1978; McIntosh, Horner & Sugai, 2009

## Essential Questions

How many students are succeeding in the subject I/we teach?

Within those subjects, what are the areas of strengths and weakness?

How can I/we establish and sustain a culture and process for strategic instructional decision-making across our building, teams and classrooms?

Mike Schmoker

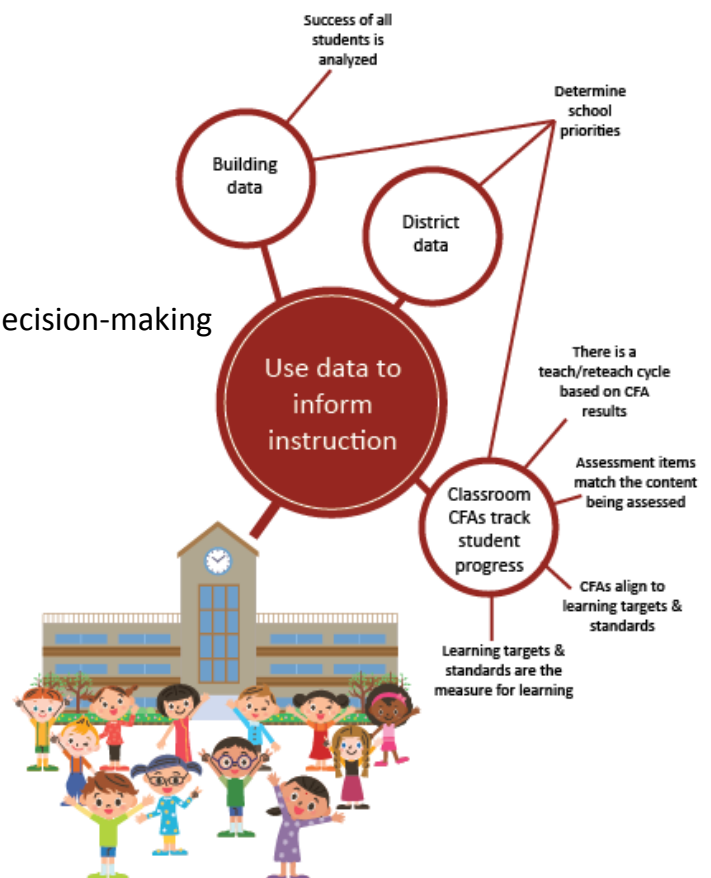


## Essential Functions

- Educators collect, chart, analyze and disaggregate student learning data.
- Educators use results to identify learning needs.
- Educators establish SMART goals based on data identified student learning needs.
- Educators use data to select a common effective teaching/learning practice to implement with fidelity.
- Educators explain results indicators for process (cause) and product (effect).
- Educators design ongoing monitoring of results (monitor, reflect, adjust, repeat).

## Learning Package Components

- Defining data-based decision-making
- Pre-requisites for effective data-based decision-making
- Steps of the process
  - Collect and chart data
  - Analyze and prioritize
  - Goal setting
  - Instructional decision-making
  - Monitor



# Common Formative Assessment

## What is Common Formative Assessment?

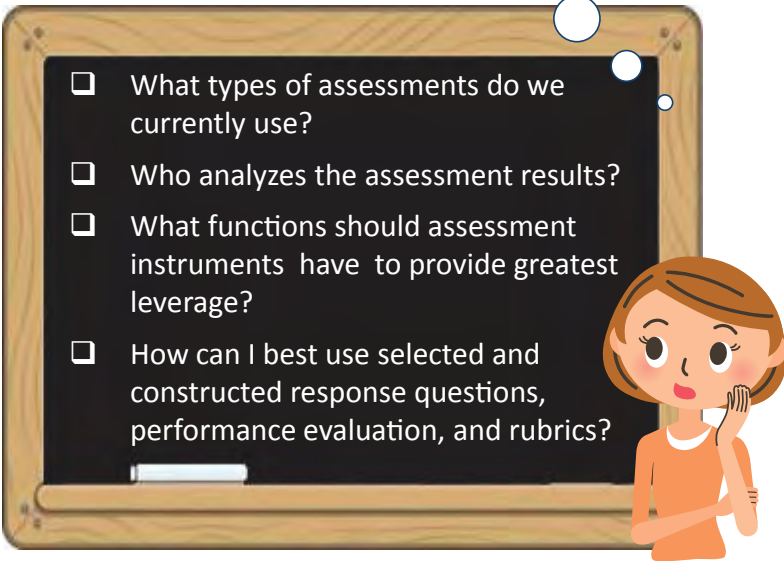
- ☐ **Common** = Given by all teachers at a grade level or in a content area
- ☐ **Formative** = Provides data to inform planning and instruction
- ☐ **Assessment** = Provides analytical rather than evaluative information

Cook & Negron 2009

**It is a process!**

## Questions to Consider

What is the difference between assessment OF learning and assessment FOR learning?

- 
- ☐ What types of assessments do we currently use?
  - ☐ Who analyzes the assessment results?
  - ☐ What functions should assessment instruments have to provide greatest leverage?
  - ☐ How can I best use selected and constructed response questions, performance evaluation, and rubrics?

## The Learning Process

“Assessment is not something that is done to students separate and apart from instruction; assessment must be – *must* be seen to be – something that is done with students as an integral part of the learning process.”

Ken O’Conner, 2002

## Benefits

Team-developed Common Formative Assessments:

- ☐ are a more efficient use of teachers’ time.
- ☐ are more equitable for students.
- ☐ are more effective in monitoring and improving student learning.
- ☐ can *inform and improve* the practice of both individual teachers and teams of teachers.
- ☐ can build the capacity of the team to achieve at higher levels.
- ☐ are essential to systematic interventions when students do not learn.

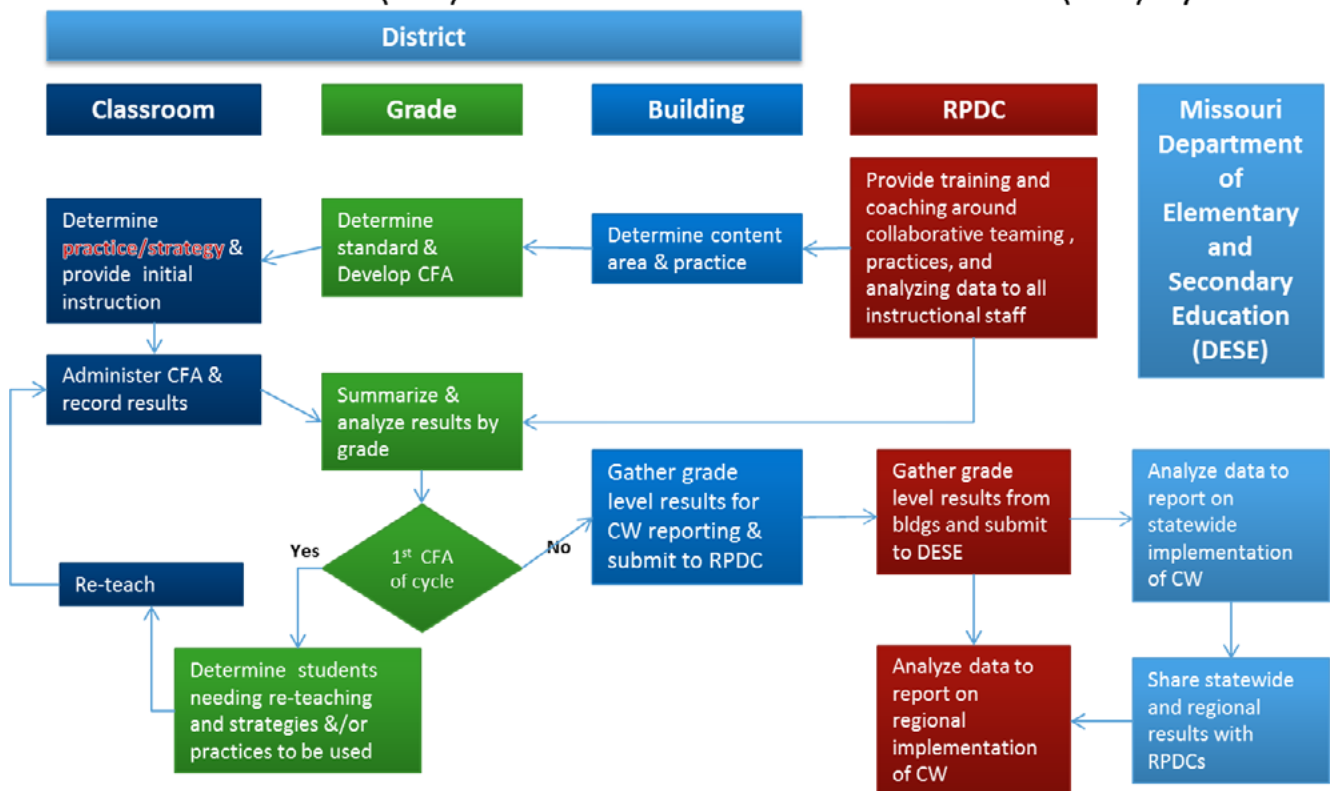
Rick DuFour, Becky DuFour,  
Bob Eaker (Sept., 2007)



## Essential Functions

- Educators develop clear and meaningful learning goals to guide instruction and student learning.
- Educators establish clear and measureable student success criteria in a rubric, scoring guide, or checklist.
- Educators construct quality assessment instruments which are of sound design and measure the learning goals.
- Educators use assessment data to improve student learning.

## Collaborative Work (CW) – Common Formative Assessments (CFA) Cycle



Missouri Department of Elementary and Secondary Education  
Special Education Effective Practices  
September 2014



# Student-Teacher Relationships

Effective Teaching & Learning Practice | Connecting with Students

## Student Teacher Relationships

### Teacher Skills

Developing relationships requires teacher skills such as;

**listening**  
**empathy**  
**caring**  
**positive regard for others**

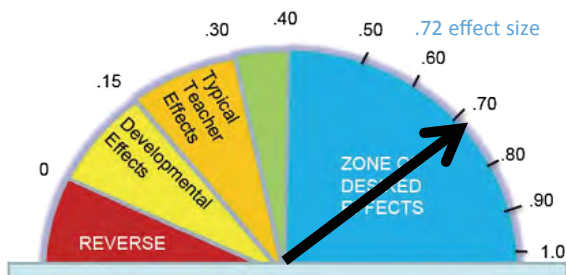
Hattie, 2009, p.118

Never let the demands of your job or the curriculum cause you to forget that each one of your students is a feeling - thinking human being. For education to be effective, it must be personal.

George Isaac Brown

### The Research

#### Student-Teacher Relationships



### Student-Teacher Relationships

#### Give Students a Voice

Create an environment where students feel safe to engage in authentic interactions.



What do you think would make this better?

#### Learn Their World

Strive for an understanding and appreciation of the students' life outside the classroom.



What did you do last night?

#### Classroom Culture

Establish connections and belonging within the classroom walls.



Let's work together to think of our class rules.

#### Listen to Students

Listen, understand and validate students needs, questions and concerns.



I understand you are frustrated with his project. How can I help you?

Children don't care what you know until they know that you care about them.



### Effective Student-Teacher Relationships



Increase levels of students' interests and enjoyment of the class.



Increase levels of students' academic achievement.

Murray 2002



Decrease the occurrence of classroom disruptions.

Phelan 1992





## Essential Functions

- Develops effective elements for building strong relationships with students into classroom practice to develop students' socially appropriate behaviors.
- Adult Behaviors-Is a reflective practitioner and continually assesses the effects of choices and actions on others.
- Develops effective methods for promoting strong relationships with students into classroom practice to improve students' academic achievement.

## Learning Package Components

- Identifying and activating student strengths
- Building relationships and trust
- Situating learning into the lives of students
- Amplifying student voice



# Engaging Student Learners

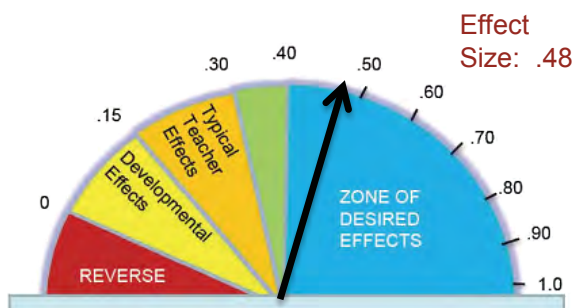
Effective Teaching & Learning Practice | Connecting with Students

## Engaging Student Learners

### What is Student Engagement?

In education, student engagement refers to the degree of attention, curiosity, interest, value, and perseverance that students show when they are learning or being taught. **This extends to the motivational level and commitment of students to learn, progress, and persist in their learning.**

### The Research



### Benefits

Students who are engaged learn at high levels and have a profound grasp of what they learn, retain what they learn, and can transfer what they learn to new contexts.

--Phillip Schlechty

### Components of Engagement

#### 1. Attentive

Student pays attention to and focuses on the tasks associated with the work being done.

#### 2. Committed

Student commits without the promise of extrinsic rewards or the threat of negative consequences.

#### 3. Persistent

Student sticks to the task even when it presents difficulty.

#### 4. Meaningful/Valuable

The student finds meaning and value in the tasks of the work.

Phillip Schlechty 2011

### Evidence of Engagement

If I have trouble understanding a problem, I go over it again until I get it.

I challenge myself to study more so I'm not just getting by.

With what I've learned I can show leadership and make a difference in my community.

I can explore, experiment and ask questions.

I learn about topics that matter in the world.



## Essential Functions

- Educator understands and plans for optimum student engagement.
- Educator practices techniques that foster student engagement.
- Educator assesses and reflects on student engagement.

## Learning Package Components

- Connection between motivation and engagement
- Characteristics of high student engagement
- Techniques for promoting high engagement of ALL learners
- Ways of assessing units and lessons for engaging qualities



# Assessment Capable Learners

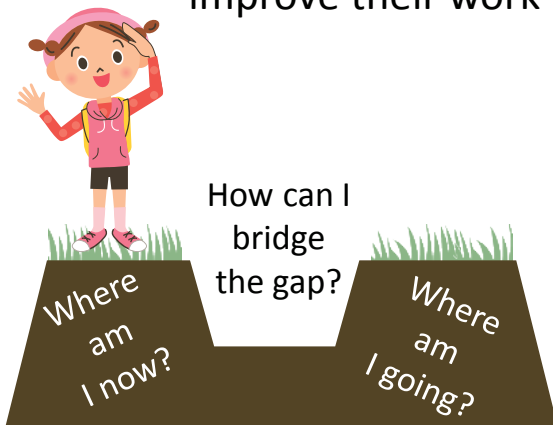
Effective Teaching & Learning Practice | Students Learning to Learn

## Assessment Capable Learners

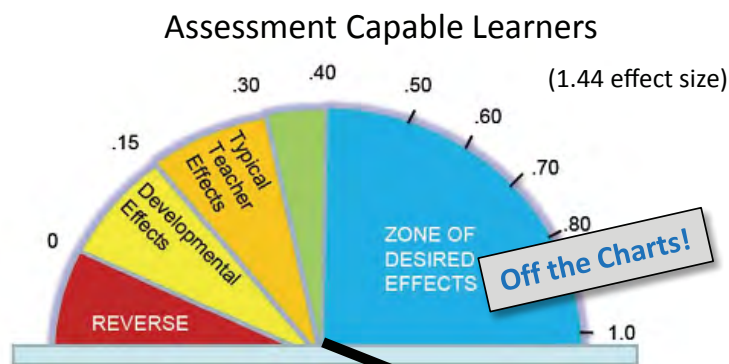
### Who are Assessment Capable Learners?

Students who:

- ☐ know the learning target for the lesson
- ☐ can describe where they are in relation to the criteria
- ☐ use that information to select learning strategies to improve their work



Effect Size



### Benefits

When students self-assess regularly, track and share their progress, their confidence as learners grows. Their motivation to do well increases as does their achievement.

Stiggins & Chappuis 2010

Just beginning, I am not sure how to do this yet.

Getting better. I'm starting to understand what to do.

Bull's eye! I can do this well all the time!



### Closing the Gap

- ☐ Students engage in reflective review (**revise**)
- ☐ Students can be encouraged to set questions and create solutions (**refine**)
- ☐ Students apply scoring criteria through peer assessment and self-assessment (**rework**)



## Essential Functions

- Recognize the benefits of developing assessment capable learners.
- Understand how to implement teaching strategies designed to develop assessment capable learners.
- Apply instructional strategies of assessment capable learners practice to all learning, regardless of grade level or content area.

## Learning Package Components

- Overview of ACL Strategies
- Student goal setting
- ACL practices
  - goal setting
  - rubrics
  - portfolios
  - student-led conferences



# Feedback

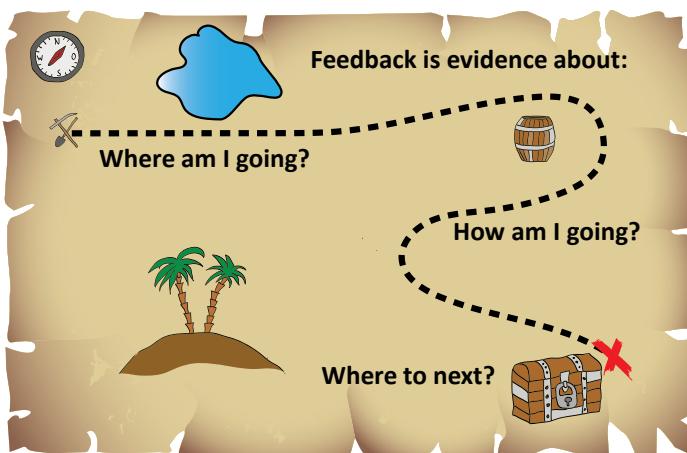
Effective Teaching & Learning Practice | Students Learning to Learn

## Feedback

### What is Feedback?

Feedback is information provided by an agent (e.g., teacher, peer, book, parent, self/experience) regarding aspects of one's performance or understanding.

John Hattie 2012



Hattie, The Power of Feedback

The simplest prescription for improving education must be. . . *Providing information about what a student does and does not understand, and what direction the student must take to improve.*

### Purpose

The main purpose of feedback is to reduce discrepancies between current understanding or performance and some desired level of performance or goal.

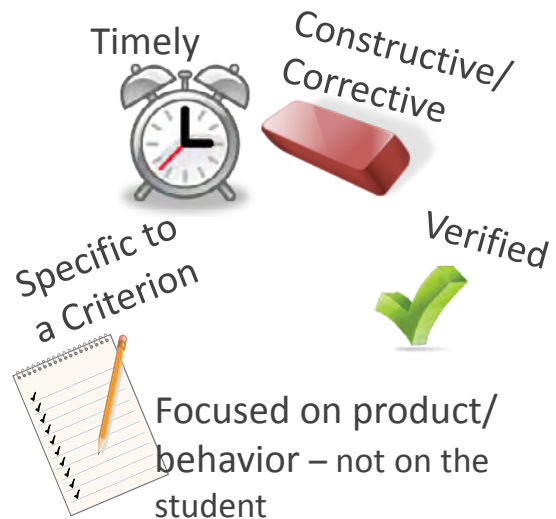
Hattie & Timperley 2007

### Results

When feedback and corrective procedures are used, most students can attain the same level of achievement as the top 20% of students.

Bellon, Bellon & Blank

### Effective Feedback is:



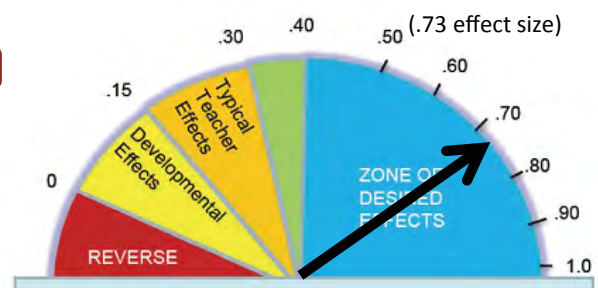
### The Power of Feedback

- ☐ Task feedback points to ideas that work and ideas that don't work.
- ☐ Process feedback gives cues for searching and strategizing.
- ☐ Self-regulation feedback reinforces engagement and persistence.

Hattie, 2007

### Effect Size

Feedback





## Essential Functions

- Feedback is clear.
- Feedback provides for students to be active participants in their learning.

## Learning Package Components

- What is Feedback?
- Why is Feedback important?
- How is Feedback effective?
- How to provide effective feedback
- A Model of Feedback





# Metacognition

Effective Teaching & Learning Practice | Students Learning to Learn

## Metacognition

### What is Metacognition?

- Awareness of one's own actions and their effects
- Posing internal questions to find information and meaning
- Developing mental maps, pictures, or plans
- Monitoring plans throughout a process and revising plans when they do not work
- Self-evaluating a completed plan

Costa 2008

### Thinking about our thinking:

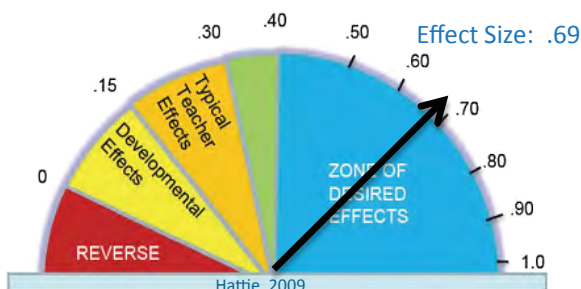


### Impact of Metacognition

- Shapes active rather than passive learners
- Gives students a sense of control over learning
- Promotes “deep learning”
- Makes students aware of their own thinking

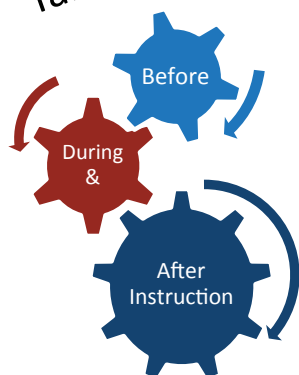
McElwee 2009

### The Research



### Four Types of Self-addressed Metacognitive Questions

Takes place:



#### Comprehension

What is the question?

#### Connection

How is this problem like one I already solved?

#### Strategic

Why is this strategy the best to solve the problem?

#### Reflection

Does the solution make sense?





## Essential Functions

- Promoting a metacognitive environment
- Teaching students to become metacognitive
- Cueing metacognition before learning
- Cueing metacognition during learning
- Cueing metacognition after learning

## Learning Package Components

- Defining metacognition
- Importance of metacognition and when to use it
- Planning for metacognition and steps in teaching metacognition
- Environment that promotes metacognition
- Assessing metacognition



# Classroom Discussion

Effective Teaching & Learning Practice | Instructional Practice

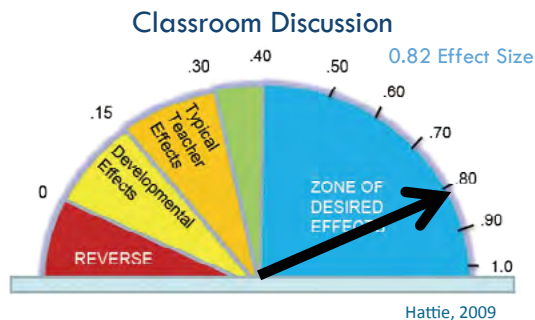
## Classroom Discussion

### Definition

“Classroom Discussion is a method of teaching, that involves the entire class in a discussion. The teacher stops lecturing and students get together to discuss an important issue.”

Hattie, 2012

### The Research



### Characteristics



Purposeful—learner outcomes in view



Open-Ended—not 1 right answer, goes back and forth

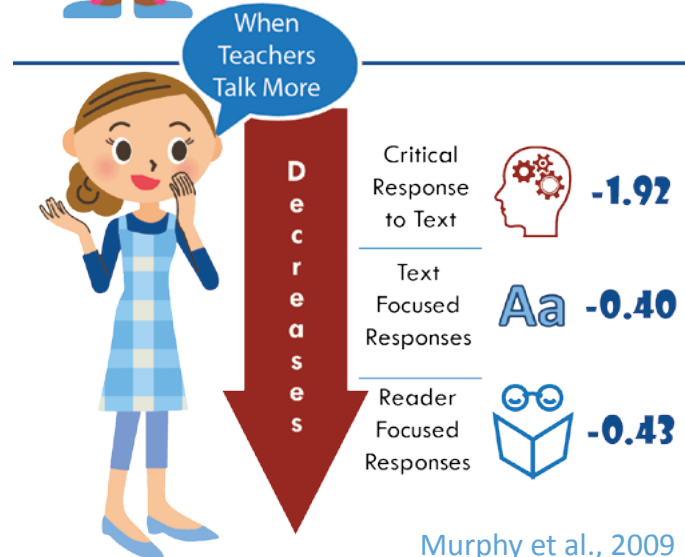
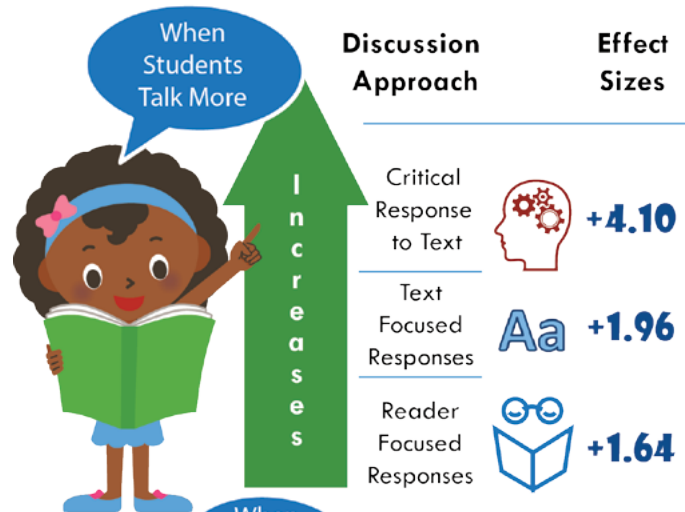


Recursive—creates a cycle of meaning



Collaborative—address learning tasks together

### Students' Comprehension of Text



Murphy et al., 2009

### The Benefits

- Allows students to make meaning through social interaction.
- Leads to deeper thinking.
- Promotes higher-level thinking
- Increases engagement with and ownership of ideas.
- Allows participation of ALL students.



## Essential Functions

- Teacher prepares for classroom discussion by establishing a classroom climate that promotes active participation.
- Teacher prepares to assess classroom discussion and has a well-developed plan and implements a plan for both student and group evaluation.
- Teacher creates a scaffold of student understanding of the context for the discussion.
- Teacher plans and models what classroom discussion looks like and sounds like.
- Teacher observes and monitors student participation and thinking throughout the discussion process.
- The teacher has created a plan for both student and group evaluation of classroom discussion.
- Teacher provides high-quality opportunities for group as well as individual self-assessment.

## Learning Package Components

- Monologic and dialogic talk
- Functions of classroom discussion
- Academic conversations
- Benefits of discourse
- Techniques for implementing focused discussion
- Assessing learning during discourse
- Feedback during discourse and questioning



# Reciprocal Teaching

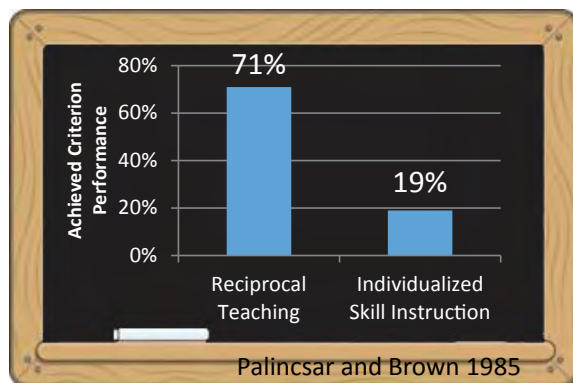
Effective Teaching & Learning Practice | Instructional Practice

## Reciprocal Teaching

### Definition

Reciprocal teaching is an effective teaching/ learning practice and is defined as students summarizing, questioning, clarifying, and predicting; they take turns being the teacher.

### Research



...teachers observed fewer behavior problems in their reciprocal teaching groups than in their control groups.

Palincsar and Brown 1985

Teachers saw increases in students' confidence and success, in their understanding and use of strategies, and in their enjoyment of literature.

Hashey, et al. 2003

### Reciprocal Teaching in Practice

I thought the chapter would be about space travel since it was called *Shooting for the Stars*.

I think ...  
**Predict**

Does this problem remind you of any other math problems you have solved in the past?

I would like to know what the phrase "naked eye" means?

What are the difficult words and ideas?  
**Clarify**

Are there any words or terms you are unsure of?

Do you think the text is related to the title *Shooting for the Stars*?

Why Who What When How  
**Question**

What math operations are needed to solve this problem?

The text informs us that as time goes by we see stars differently

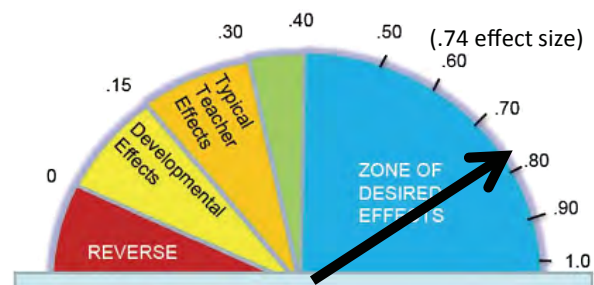
Theme Lesson Moral  
**Summarize**

Make a detailed plan on how to solve this problem.



### Effect Size

Reciprocal Teaching  
2 meta-analyses, 38 studies, Rank 9th





## Essential Functions

- Teacher models, practices, and scaffolds the usage of the four components of reciprocal teaching.
- Before reading the teacher activates students' prior knowledge to anticipate learning.
- During reading the teacher engages students in clarifying, questioning, predicting, and summarizing the reading material.
- After reading the teacher engages students in learning reflections.

## Learning Package Components

Identify why reciprocal teaching is important

- Understand the core concepts of reciprocal teaching
- Recognize the core components for implementation
- Guided practice to apply reciprocal teaching practices in your classroom





# Student Practice: Spaced vs Massed

Effective Teaching & Learning Practice | Instructional Practice

## Student Practice: Spaced VS

Review or practice new skills  
with a time delay between trials.  
(Distributed or Interleaving)



## Massed

Review or practice new skills  
in long single sessions.  
(Cramming)

### History



The spacing effect is one of the oldest findings in Experimental Psychology. In the field of Psychology the **spacing effect** refers to the finding that information, which is presented over spaced intervals is learned and retained more easily and more effectively.

Ebbinghaus, 1885

### Why Does Spaced Practice Matter?

If information is repeated in a distributed fashion or **spaced over time**, it is learned more slowly but is retained for much longer.

Roediger III, H. L., & Pyc, M. A., 2012

8 8 8 8 8 8 8 8 8 8  
x8 x6 x4 x2 x0 x9 x7 x5

### How to Use Spaced Practice

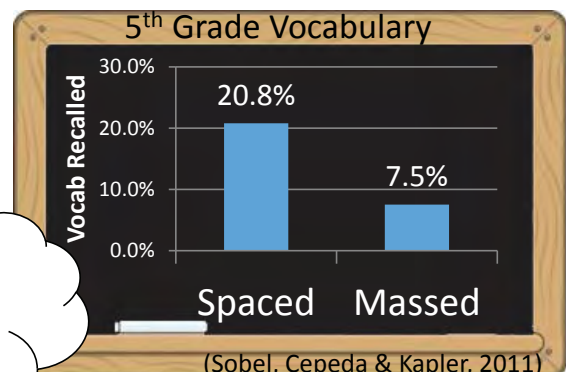
Repeat Information or skill  
with irrelevant activity between.

OR

Interleaved practice by having  
students study different  
examples of a concept spaced  
across time.

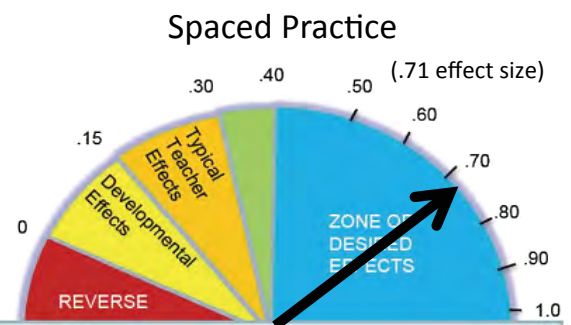
Like when previous  
learning sessions  
are reviewed  
before class!

### Research Results



Students tested 5 weeks after  
last review

### How Effective is Spaced Practice?







## Essential Functions

Educator provides practice sessions for students offering spaced learning opportunities.

- address changes that need to be made to the learning environment to help students feel safe and valued.
- describe how to help students make personal connections to what is being practiced.
- describe the “phases” needed to build the knowledge or skill base necessary for practice.
- are “spaced” over a time span.
- specify whether practice is “blocked” or “interleaving” or both.
- are deliberate (target criteria for improvement).
- are dynamic (challenging, novel, and/or in varied contexts).

## Learning Package Components

- Understand the research and core components of space vs massed practice
- Determine the types of concepts which best fit spaced practice
- Determine the amount of space between repetition or practice of concepts
- Apply spaced practice to identified concepts
- Plan for classroom application



# Direct Instruction

Effective Teaching & Learning Practice | Instructional Practice

## Direct Instruction

### What is Direct Instruction?

“Direct Instruction is the method that demonstrates the power of teachers working together to plan and critique a series of lessons, sharing understanding of progression, articulating intentions and success criteria and attending to the impact on student and teacher learning.”

D.W. Carnine, 2000

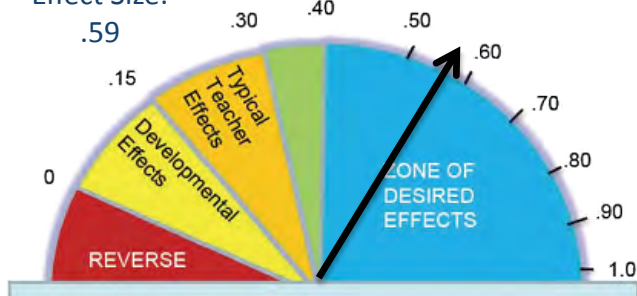
### The Research

The research demonstrates the **step-by-step sequencing** and breakdown of academic content significantly benefits students understanding. This **step-by-step strategy** shows students how a thinking process can lead to accurate solutions.

Gersten & Canine, 1986

### Effect Size

Effect Size:



### Seven Essential Steps

#### 1. GOAL

Learning intention: What should students know, do, & understand?

#### 2. MEASURE

Establish success criteria in student-friendly language with timeframes for accountability.

#### 3. HOOK

Catch students attention to build commitment and engagement in a learning task.

#### 4. PRESENTATION

Teacher provides input & modeling, monitoring for student understanding.

#### 5. GUIDED PRACTICE

Teacher provides direct supervision determining mastery & provides students with feedback or remediation as needed.

#### 6. WRAP UP/CLOSURE

Summarize goals & measures, review & clarify key points, help students organize thinking & learning, and apply key skills.

#### 7. INDEPENDENT PRACTICE

Reinforce practice using “cold” materials, peer-teaching, homework, or project-based activities.



## Essential Functions

Instruction contains:

- Learning Intention
- Success Criteria
- Hook
- Lesson Presentation
- Guided Practice
- Closure
- Independent Practice

## Learning Package Components

7 essential steps of Direct Instruction

- Learning intentions
- Success criteria
- Hook
- Presentation
- Guided practice
- Closure
- Independent practice



# Using Technology in Classroom Instruction

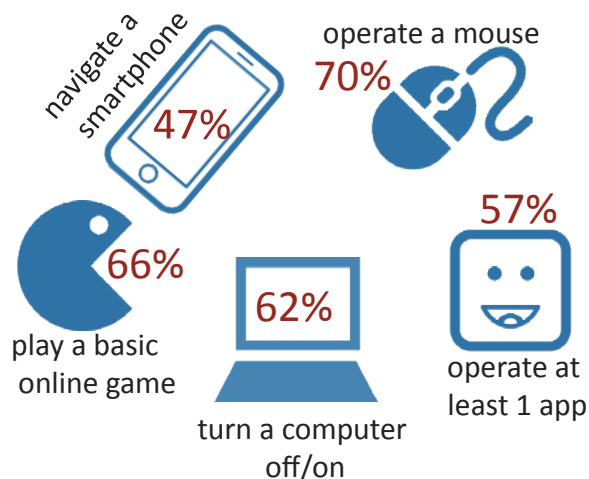
## Implementation Supports | Using Technology

### Using Technology in Classroom Instruction

#### The Definition

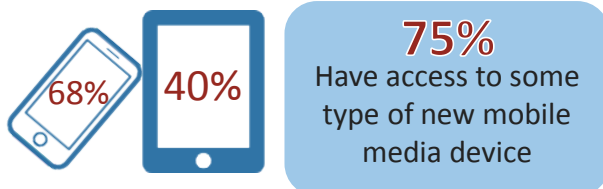
The use of hardware and software to enhance and provide opportunities for critical thinking, communicating clearly, collaborative learning, creative thinking, and problem solving in the classroom.

#### Tech Savvy Kids (ages 3-5) Can:



AVG Digital Diaries 2014

#### Kids Age 0-8 Access to Mobile Media



Common Sense Media 2013

#### Successful Implementation

If we are preparing students for jobs

**NOT YET CREATED**

and to use technology



**NOT YET INVENTED**

*THEN* we need to teach kids how to use a variety of technology applications so they have a

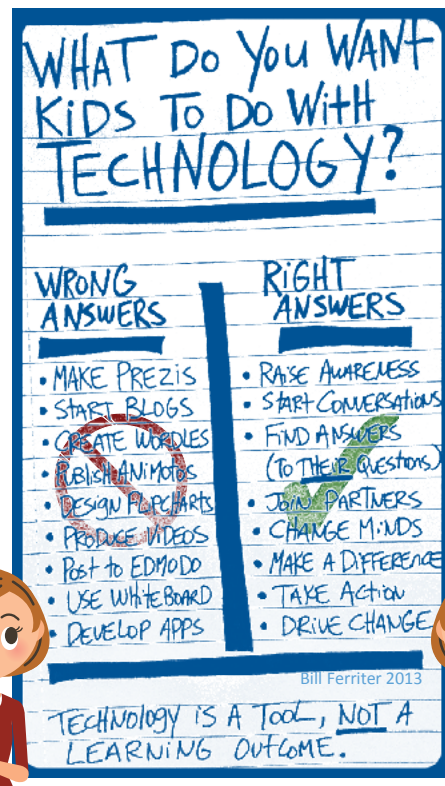
**wider knowledge base**

to work with.

We should strive to teach students

 **new** tricks  
for **old** tools   
and **new** tools  
for **new** tricks!

#### Goals for Using Technology





## Essential Functions

- The teacher models and facilitates opportunities for students to demonstrate the four learning and innovation skills.
- The teacher selects appropriate technology tools to meet the instructional needs of students.
- The teacher models and demonstrates proficiency in using the selected technology tool.

## Learning Package Components

- Examine and practice technology applications to assist in effective teaching and learning practices
- Consider challenges and potential barriers to implementation
- Plan for implementation of technology applications in classroom instruction



# School-Based Implementation Coaching

## Implementation Supports | School-wide Implementation Coaching

### *Coaching is a process!*

#### How Coaching Works?

Because we value outcomes, **80%** or more of the time spent on performance support should be devoted to “coaching” practitioners how to do the intervention, better and better over time.

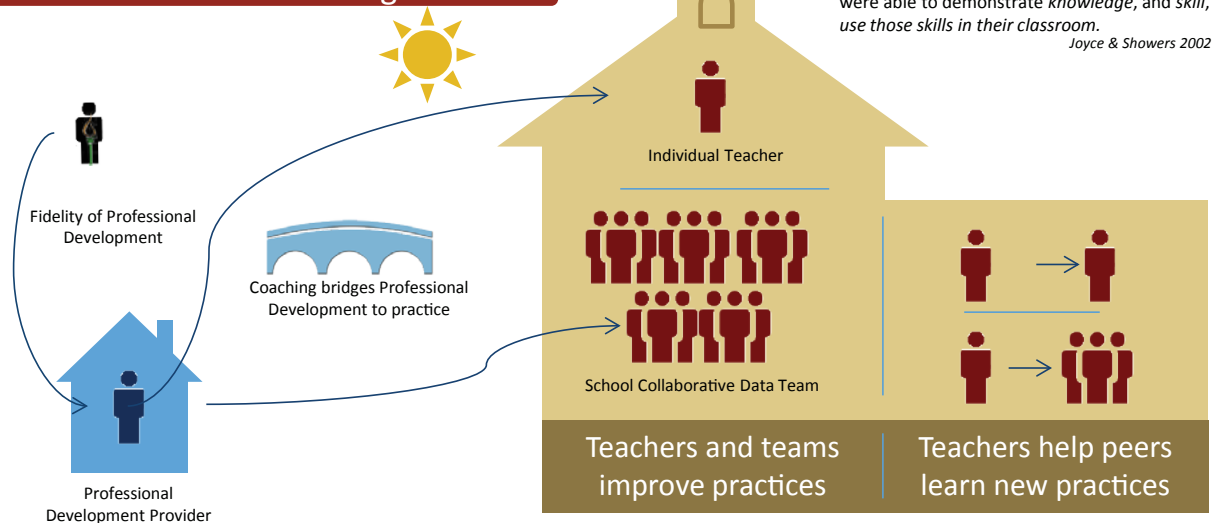
Karen Blase and Dean Fixsen, University of North Carolina - Chapel Hill

#### When is Coaching Needed?

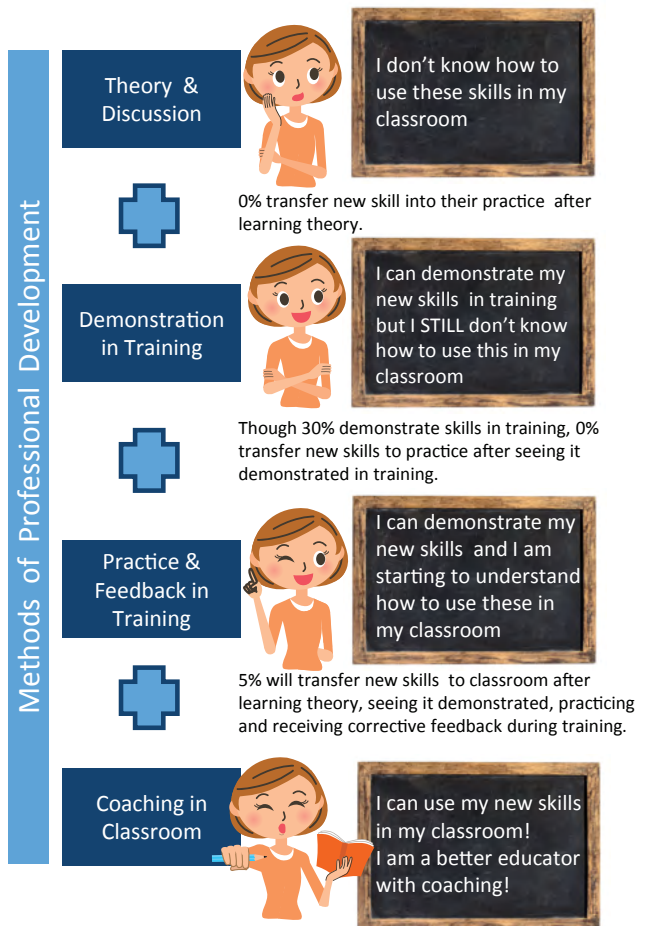
1. When learning for the first time
2. When wanting to learn more
3. When trying to remember and/or apply
4. When things change
5. When something goes wrong

The Five Moments of Need©(Dr. Conrad Gottfredson 2010)

#### Who Needs Coaching?



#### Why Coaching is Important?



Coaching for Better Instruction = Improved Outcomes





## Essential Functions

Understand the purposes of the school-based implementation coaching process by clarifying the following.

- Developing and maintaining coaching relationships
- Facilitating the improvement process
- Communicating in a timely and responsive manner
- Engaging in solution-driven dialogue

## Learning Package Components

- Assessing a need for coaching support
- Developing and maintaining relationship for coaching
- Techniques for facilitating the change process
- Effectively providing and eliciting feedback



# Implementation

## Getting Started

Are you ready to get started? Refer to the Journey of the Collaborative Work School on page 5. Also, the Practice Profiles for each learning package are valuable resources for determining next steps.



Use this QR code  
to access an  
interactive version  
of Journey of a  
Collaborative Work  
School

## Foundations

As a building leadership team, reflect on your school-wide practices in the three *Foundation Practices*. The foundations are essential to sustaining effective teaching and learning. Do educators effectively collaborate and review data when making instructional decisions? As a team, reflect on the following items. Are they in place? If not in place, is training or coaching needed?

Collaborative Data Teams	Yes
1. Building schedule supports collaborative data team meetings at least twice per month.	<input type="checkbox"/>
2. Agendas have a consistent format, including suggested time limits.	<input type="checkbox"/>
3. Meeting minutes distributed to members and other stakeholders in a timely and consistent manner.	<input type="checkbox"/>
4. Team roles are assigned.	<input type="checkbox"/>
5. Team norms are developed.	<input type="checkbox"/>
6. Action items and responsibilities are outlined.	<input type="checkbox"/>
7. There is evidence that the team shares responsibilities and duties for following through with action items.	<input type="checkbox"/>
8. Student-level data is discussed at each meeting.	<input type="checkbox"/>
9. Team shares and discusses instructional practices affecting student learning.	<input type="checkbox"/>



Common Formative Assessment	Yes
1. Learning targets are established.	<input type="checkbox"/>
2. Common formative assessment is linked to selected learning standards.	<input type="checkbox"/>
3. Assessment items are appropriate for type of learning to be assessed.	<input type="checkbox"/>
4. Achievement levels are defined.	<input type="checkbox"/>
5. Students receive feedback based on learning goal and assessment results.	<input type="checkbox"/>
Data-based Decision-making	Yes
1. Teachers administer CFAs, score, and use results for discussion.	<input type="checkbox"/>
2. Teacher implementation data (cause data) is collected and reviewed within the context of student outcomes (effects).	<input type="checkbox"/>
3. Teams conduct ongoing monitoring activities of 1) the DBDM process steps and 2) student outcomes.	<input type="checkbox"/>

## Teaching and Learning Practices

The teaching and practice practices are clustered into *Connecting with Students*, *Students Learning to Learn*, and *Instructional Practices*.



Begin your journey with the learning packages addressing *Connecting with Students*.



Then add on the learning packages addressing *Students Learning to Learn*.



Remember: Always keep the *Foundation Practices* in motion. Reflecting on your teaching and learning practice alongside student learning data will provide key insights for charting your next steps with the *Instructional Practices*.

## Implementation Supports

School-based implementation coaching is essential for school-wide implementation and sustaining implementation. Grade-level leaders are encouraged to receive this training alongside training in the *Foundation Practices*. The other supporting learning packages address technologies complimenting the teaching and learning practices and can be rolled-out to educators while they are learning about the practices.

# Implementation Plan

## Planning for Implementation with Fidelity

School-wide implementation with fidelity is essential for achieving intended outcomes. Throughout the collaborative process are data-driven elements. This template outlines the critical components for organizing the Collaborative Work process, getting support when needed, and monitoring implementation effectiveness.

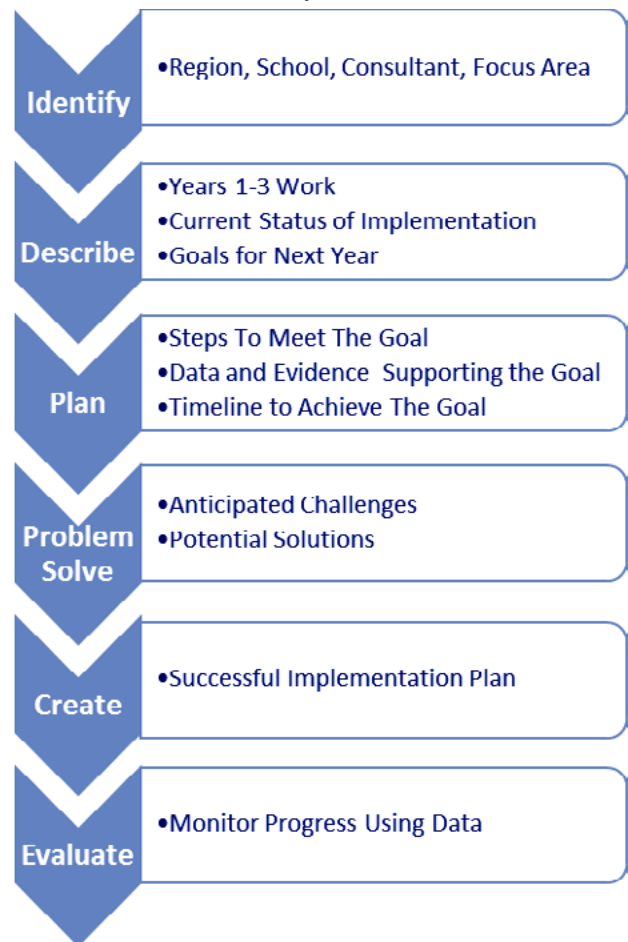
### Essential Components

- Identify the Region, School, Consultant, and Focus Area
- Description of years 1-3 Collaborative Work
- Current status of implementation
- Goals for implementation next year
- Steps to meet the goal
- Data and evidence supporting the goal
- Description of how Collaborative Work building funds will be used to support the goal
- Timeline to meet the goal, including a schedule and focus of professional development, meetings, observations, and coaching
- Description of anticipated challenges and potential solutions

### Resources

- CW Self-Assessment
- Practice Profiles
- Learning Packages
- CFA data forms
- RPDC support
- School Implementation Scale Results
- Team Functioning Survey Results

### Ongoing Implementation Cycle





Collaborative Work Process Planning Tool			
RPDC	District	School	Consultant
Area of Focus			
Describe Prior Years of Collaborative Work (What Happened?)			
Current Status of Implementation (Where are you now?)			
Goal for 2015-16 Implementation (Where do you want to be?)			
Steps to Achieve Implementation Goal (How will you get there?)			
Supporting Data and Evidence (What sources will you use to monitor your implementation?)			
Timeline to Meet Goal (When will you reach your goal?)			
Description of Allocated Budget and Resources (What do you need to complete this step? People, money, tools, etc.)			
Description of Potential Challenges (What barriers might you face?)			
Description of Possible Solutions (How will you overcome barriers?)			
Evaluation (How will you monitor and evaluate implementation progress?)			

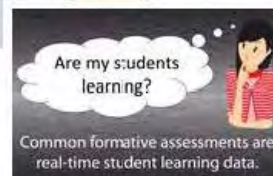


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www.moedu-sail.org



## Featuring Missouri Collaborative Work: Improving Learning Outcomes for All Students.



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