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EdData II Project

# Linking Assessment, Instruction, and Professional Development to Improve Reading Outcomes

May 12, 2008

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## About the presentation

- This presentation was prepared for a USAID Education Sector Professional Development Course on early grade reading, Washington, DC, May 12, 2008. The training was organized by the Bureau of Economic Growth, Agriculture, and Trade (EGAT) for the Education Sector Council's Training for Education Sector Teams program.
- Dr. Linan-Thompson is a consultant to RTI International on the USAID EdData II project, Contract No. EHC-E-00-04-00004-00.

# Assessment

- At a national level, can give a baseline of children's current reading levels, identify gaps in the curriculum, provide information for planning teacher professional development, and provide information for goal setting.

## Why assess?

- Children enter school with discrepant language/literacy experiences.
  - Literacy: 1,000 hours of exposure to print versus 0-10 (Adams, 1990)
  - Language: 2,153 words versus 616 words heard per hour (Hart & Risley, 1995)
- These differences can be much greater in developing countries since school attendance also varies.

# School attendance

- Preschool
  - 67% of children who are not poor
  - 55% of poor children
  - 30% of children living in extreme poverty
- Primary
  - 94% of children who are not poor
  - 93% of poor children
  - 90% of children living in extreme poverty

# School attendance

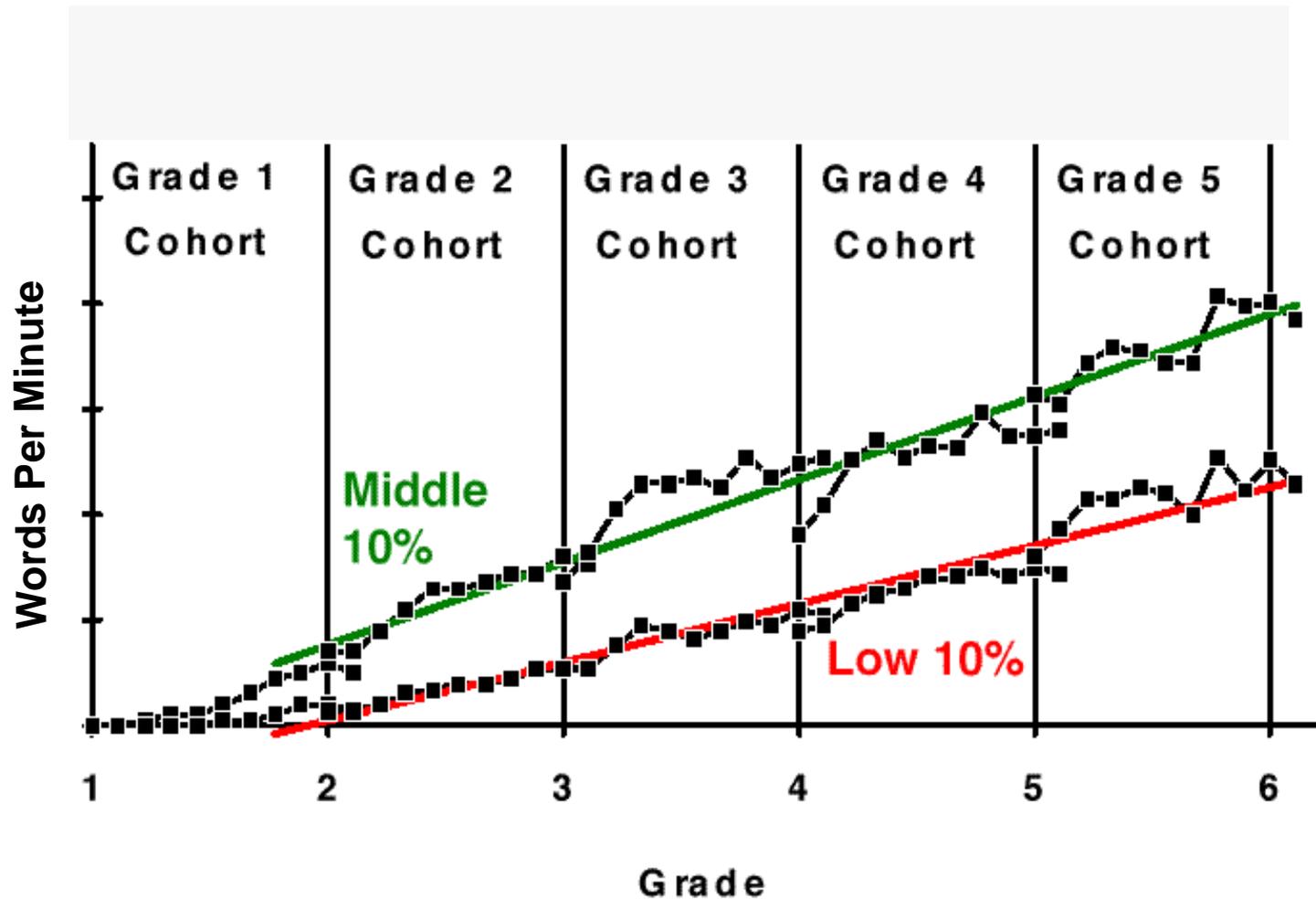
- Secondary
  - 83% of children who are not poor
  - 71% of poor children
  - 40% of children living in extreme poverty

2004-2005 Educational Indicators of Peru

These factors impact student learning.

# Why does the gap between groups widen?

Good, Simmons, & Smith, 1998



## What does this tell us?

- Reading trajectories are established early.
- Readers on a low trajectory tend to stay on that trajectory **unless** instruction changes and they learn to read.
- The later children are identified as needing support, the more difficult it is to catch up and the less likely they are to become proficient readers.
- Children need to learn to read early. It is only then that they can read to learn.

# Instruction

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## Goal:

Ensure that children **learn to read** in the first year of school.

## What does that mean?

- Children can decode text.
- Children read with appropriate speed and accuracy.
- Children understand what they read.
- These are the skills that are assessed by the EGRA measures.

## What do they need?

- Oral language skills to communicate their thoughts, ideas, and knowledge
- Strategies for “reading” unknown words they encounter
- Strategies for determining the meaning of unknown words
- Strategies for monitoring their comprehension

## To ensure that children learn to read:

- Intervene early and strategically during critical windows of reading development
- Identify need, allocate resources, and design and modify instruction
- Develop and promote a comprehensive system of instruction

# Critical windows of opportunity

	<i>K</i>	<i>1</i>	<i>2</i>	<i>3</i>
<i>Phonemic Awareness</i>	<i>X</i>			
<i>Decoding/Encoding</i>		<i>X</i>	<i>X</i>	
<i>Automaticity with connected text</i>		<i>X</i>	<i>X</i>	
<i>Vocabulary</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>
<i>Comprehension</i>				

# EGRA protocols

<b>Component</b>	<b>Measure</b>
<b>Concepts of Print</b>	<b>Indicate where to begin reading, direction,</b>
<b>Letter Recognition</b>	<b>Letter Naming Fluency</b>
<b>Phonological Awareness</b>	<b>Phoneme Segmentation</b>
<b>Alphabetic Principle</b>	<b>Nonsense Word Fluency Dictation</b>
<b>Accuracy and Fluency with Connected Text</b>	<b>Word Reading Fluency Oral Reading Fluency</b>
<b>Comprehension</b>	<b>Response to Questions: After listening to a story After reading a story</b>

## Identify need

Use EGRA data to identify areas where instruction is missing or has not been robust.

## Identify need: Kenya example Standard 2

<i>Letter recognition</i>	<i>22.7</i>	<i>&lt;27</i>
<i>Word recognition</i>	<i>7.5</i>	<i>25</i>
<i>Passage reading</i>	<i>11.4</i>	<i>45</i>
<i>Comprehension</i>	<i>.4</i>	<i>5</i>
<i>Phoneme segmentation</i>	<i>11.5</i>	<i>30</i>

## Students fail to learn to read because they:

- have had limited early literacy experiences;
- lack basic decoding skills;
- have failed to master basic decoding skills because of poor PA, AP;
- lack instruction or practice
- are accurate but not automatic; or
- learn very slowly.

## Design and modify instruction

Review current programs to determine whether or not they are consistent with country standards and with evidence-based instructional content and practices.

# Levels of instruction

- Student level
- Class level
- School level
- System level

# Standards

- Obj. 1.2.d Read simple sentences/passages related to greetings and polite language
  - 2.2.f colors
  - 4.2.e numbers
- Obj. 5.2.1.a Read books in home language
- Obj. 5.2.1.e Read a range of materials with some independence, fluency, accuracy, and understanding.

## Why are students not making benchmarks?

- Instruction focuses on communication skills:
  - Speaking
  - Listening
  - Reading
  - Writing
- Instruction in each of these areas is rotated every day
- Instructional focus is on reading not learning to read.

## Why are students not making benchmarks?

- Instruction is not robust enough—need reading instruction every day.
- The focus is not on the most critical areas.
- Students are not taught to read—focus in on language.
- Reading instruction is see and say approach.

## Design and modify instruction

- Instruction should reflect a balanced approach to instruction—
  - Includes both foundational skills and higher level skills
  - Focus is on teaching children to read—initially that means acquiring the skills to decode words automatically.

# Design and modify instruction

- Instruction in all components of reading and writing
  - Phonemic awareness
  - Phonics
  - Automaticity with the code
  - Vocabulary development
  - Comprehension development
  - Writing skills

## Building a beginning reading program based on EGRA data

- Which phonological awareness skills can be taught to a whole class?
- What are some approaches to teaching decoding skills?
- What are some strategies to help children build fluency in reading connected text?
- What are some effective ways to teach children vocabulary?
- What are effective ways to teach comprehension skills?

Hagar the Horrible



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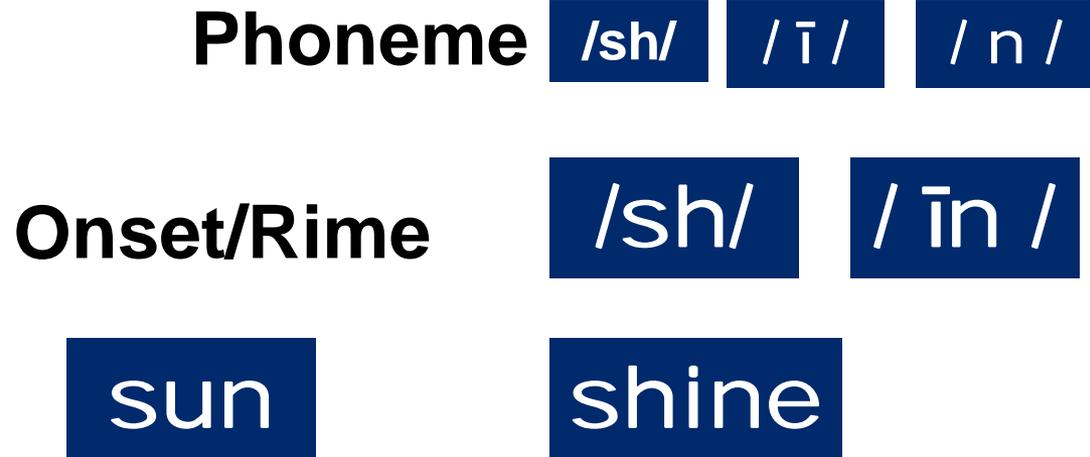
# Phonological awareness

- **PA is the ability to hear, identify, and manipulate sounds in spoken words.**
- Why is it important?
  - Children need to know the sounds in words so that they are able to map the sounds/phonemes to letters/graphemes and can acquire the alphabetic principle.
  - Phoneme segmentation as well as phoneme blending are predictive of reading success.

# There are levels of phonological awareness

We know that phonemic awareness is the highest level of the phonological awareness skills.

**Syllable**



**Word**

sunshine

## Effective practices

- Focus on 1-2 skills at a time.
- Use explicit language.
- Model skill.
- Provide opportunities for guided and independent practice.

# Phoneme identification

- Objective: Given a word, students will identify the first sound.
  1. Tell students that they will identify the first sound they hear in the word you say.
  2. Model the task. “Listen, the word is mat. The first sound is /m/.”
  3. Ask students to do the next word with you.
  4. Ask students to identify the first sound in the next word. Have students respond as a group; then call on individual students.
  5. If all students perform the task correctly, give students new words until you are convinced this skill has been mastered.
  6. Review meaning of words with students.

# Activities

- Given three words, students will identify the word that has a different vowel sound in the target position.
- Given a word, students will determine whether or not the target sound is present in the beginning, middle, or end of the word as identified by the teacher.

## Phoneme blending

- Objective: Given a segmented word, students will blend the sounds and identify the word.

Tell students they will listen carefully to the sounds you say and then tell you the word.

Model blending phonemes into words.

For example, /s/ /a/ /t/. What word is that? Yes, that word is “sat.” If students are having difficulty hearing the sounds and blending into words, stretch the sounds. If students still have difficulty, stretch the first sound (the onset) and say the last two sounds (the rime) as a syllable (/s/ /at/).

## Phoneme blending *(continued)*

Have students do several words with you. For example, /c/ /a/ /n/. “Say the word with me: ‘can.’”

Give students 2-3 words to blend. Be sure students are performing the task correctly by asking each student to blend sounds into a word.

If all students are performing the task correctly, continue giving students words for a short time.

# Segmenting phonemes

- Objective: Given a word, students will separate the word into phonemes.
1. Tell students that they will learn to separate words into smaller parts; “I will say a word and you will say each sound separately.”
  2. Model the task. “Listen, the word is sat. The sounds are /s/ /a/ /t/.”
  3. Ask students to do the next word with you. Have students respond as a group; then call on individual students.

## Segmenting phonemes *(continued)*

4. If all students perform the task correctly, give students new words until you are convinced this skill has been mastered.
5. Review meaning of words with students.

## Wrap-up

- Phonemic awareness is critical to later reading ability.
- Phoneme segmentation is the task that is most predictive of later reading ability.
- Phonemic awareness tasks are oral.
- After initial instruction, it is most effective when combined with print.

# Alphabetic principle

- **AP is the understanding that the sequence of letters in a written word represents a sequence of sounds in spoken words.**
- Why is it important?
  - You use letter-sound knowledge to decode written language.
  - Using grapho-phonemic knowledge is a phonics strategy.

# Letter-sound associations

- To help children develop the alphabetic principle:
  - Read alphabet, rhyming, and repetitive books
  - Play letter/sound bingo
  - Letter/sound road race

## Example of explicit instruction

Two ways to teach identifying the first sound in a word:

**“The first sound in man is /mmm/. Everyone, say the first sound in *man*, /mmm/”**

**“Man starts with the same sound as the first sound in *mountain*, *mop*, *moon*, and *Miranda*. Does anyone know other words that begin with the same sound as man?”**

Which is more explicit?

# Teaching letter-sound relationships

- Large letter cards
- Pocket chart
- Letter tiles and magnetic board
- Instructional sequence:
  - Review letter name.
  - Introduce letter sound.
  - Discriminate among words that begin with “m” and those that begin with other letters.
  - Present an example of a word with the “m” in the final position.
  - Discriminate among words that end with “m” and words that end in other letters.

# Letter knowledge

- To help children recognize and name letters:
  - Provide opportunities to associate letter names with their shapes
  - Identify upper- and lowercase letters
  - Make sure that students can identify letters when presented randomly.
- Use
  - Alphabet books
  - Alphabet mats
  - Board games
  - Letter cards and charts
  - Magnetic letters, etc.

# Phonics

- **Phonics is an approach to reading instruction that emphasizes letter-sound relationships and generalized principles that describe spelling-sound relationships in a language.**
- Why is it important?
  - It provides the foundation for later reading and writing skills.
  - Gives students a means for reading and spelling unknown words.

## What we know

- Good readers primarily rely on letter-sound correspondences in words rather than context or pictures to identify words.
- They use reliable strategies to decode words.
- They read words a sufficient number of times for words to become automatic.

# Types of phonics instruction

- Synthetic: sound out and blend sounds
- Analytic: analyze previously learned words
- Embedded: less explicit instruction in phonemic decoding; the context of instruction is the text

# Instructional considerations

- Teach the common sounds first.
  - Common sounds are the sounds that a letter represents most frequently.
- Provide explicit and systematic instruction.
- Progresses to blending sounds to read word.

# Instructional activities

- Help students learn that
  - Some letters represent more than one sound
  - Different letters can represent the same sound
  - Sounds can be represented by a single letter or combinations of letters
  - Different strategies can be used to read unknown words

## VcE rule

- Words with an e at the end have the long vowel sound. This word (make) has an e at the end so it has the long sound a. The word is make. Let's read some more words with e at the end. Remember to say the long vowel sound.

# Word reading

- Tell students they will be reading new words.
- Tell students that when shown a word card, they will first sound out each letter-sound correspondence and then read the word fast.
- Show students a word card. Model saying each sound continuously as you point to each letter. For example, iiiinnnn.
- After sounding out the word, read the word fast: “in.”
- Show a word and ask the students to say each sound. Make sure each sound is correct. If a student makes an error, review the correct letter-sound correspondence and repeat.
- After students have sounded out the word, ask them to read the word fast. If a student reads the word incorrectly, ask him or her to sound it out and then read the word fast.

## Students need to learn various strategies

- Can I sound it out?
- Re-run: go back and read again
- Read-on: Does that help?
- Look at the picture.
- Ask yourself, have I seen this word before?
- Ask yourself, does this word look like another word?

# Connecting the components

- Phonemic awareness
  - The ability to hear, identify, and manipulate the sounds in spoken words.
- Letter recognition
  - Recognizing, naming, and producing the letters of the alphabet; both upper- and lowercase
- Alphabetic principle
  - Mapping sounds to print
- Spelling and writing

# Fluency

- **Reading accurately, quickly, and with expression.**
  - It is an indicator that we can decode and comprehend at the same time.
  - It requires automaticity of at least one of these tasks
- Quick, accurate recognition of letters and words
- Why is it important?
  - When reading is automatic, it frees up cognitive processes for comprehension

## To be fluent readers, students need to...

- Know how to read words
- Automatically recognize words
- Increase speed while maintaining accuracy

## Fluency instruction includes:

- Teaching children to decode to automaticity: every word becomes a sight word.
- Building decoding skills so that children recognize spelling patterns in words.
- Practicing reading the word patterns taught in connected text.
- Reading with a model for guided oral repeated reading to build fluency.

# Instructional approaches

- Repeated oral reading practice
  - Oral reading with guidance and feedback
    - Repeated reading
    - Radio reading
    - Paired reading
    - Readers' theater
- Independent reading
  - Students read extensively on their own or with minimal guidance
    - SSR
    - DEAR
    - AR

# Critical characteristics

- Modeling
- Corrective feedback
- Opportunity to monitor progress
- Opportunities to reread.

## Wrap-up

- Repeated oral reading results in increased reading proficiency
- There is no evidence supporting the efficacy of encouraging independent silent reading as means for improving fluency
- Fluency should be assessed regularly

# Vocabulary

## **Understanding and use of words:**

- Ability to produce a specific word for a particular meaning
- Ability to understand spoken/written words

Why is it important?

- Learning is profoundly dependent upon vocabulary knowledge.
- Teaching vocabulary increases children's reading comprehension (Nagy et al. 1993; Geva & Petrulis-Wright, 1999).

# Vocabulary development

- How do students develop vocabulary?
- Implicit Instruction
  - Oral language
  - Read to or read
- Explicit Instruction
  - Word parts
  - Context clues
  - Definitions

# Vocabulary instruction

- Teach difficult vocabulary prior to and during lesson
- Provide systematic instruction to develop vocabulary
- Engage students in meaningful interactions about text

# Vocabulary

- Focus on a small number of critical words
  - Importance and utility
  - Instructional potential
  - Conceptual understanding
- Use of a variety of methods to teach vocabulary such as visually presenting words, defining them, using gestures, and objects to illustrate key features prior to reading.
- Teach students to use morphological cues that might indicate meaning and part of speech

## Students need:

- Multiple exposures in different formats
- Systematic and cumulative review
- Contextualized instruction
- Semantic connections

# Routine for vocabulary instruction

1. Pronounce the word, give Spanish cognate, and define it
2. Ask or tell students how the illustration is representative of the word
3. Use word in two sentences
4. Give examples and non-examples
5. Give students opportunities to encounter the word

## Sharecroppers (Aparceros)

Key vocabulary term from the text

Translation into Spanish

Farmers who lacked land and necessary supplies, such as mules, plows, and seed; these farmers borrowed the land and supplies from the landowners, then promised the landowner a large part of the harvest in return for these items plus interest.



Age-appropriate definition

Relevant graphic/pictorial image

This system gave landowners a great deal of control over tenant farmers and sharecroppers.

If the harvest was bad one year, sharecroppers had to promise part of the next year's harvest to pay back the owner; many fell into debt and had a hard time making enough to pay back the owners and take care of their families at the same time.

### Yes/No Questions

Did sharecroppers have a difficult life?

Could sharecroppers grow anything they wanted?

A clarifying sentence establishing relevancy to student lives and

Yes/No questions to engage class

Inflected forms: sharecropper, sharecropping.

Other forms of the word

Turn and Talk: What happens when one person is in debt to another? Who has more control of the situation, the person owed or the person who owes?

Discussion prompt: connects the word to the larger themes of the chapter/unit of study.

# Vocabulary instruction components

- Pronounce words
- Word consciousness
- Student friendly definition and discussion
- Check understanding
- Powerful sentences

**Before Reading – Day 1**

1. Present word to students.

***Our first word for today is atmosphere. [Write the word on the board.] Let's say the word together.***

2. Discuss with students what is known about the word.

***Raise your hand if you have ever heard the word atmosphere before. Raise your hand if you know something about it. [If 3/4 of your students have heard the word before continue with the next directions. If not, skip this step and continue with step 3.]***

***Think about the word atmosphere.***

***What do you know about the word?***

***Turn to your partner and tell them one idea about the word. Be prepared to share with the rest of the group what you and your partner talked about.***

3. Discuss the word.
- Provide a student-friendly definition of the word
  - Provide visuals to help students understand
  - Highlight word parts if applicable
  - Lead students in identifying the word part and reading words with that word parts if applicable

*We are going to study a definition for atmosphere. The definition for atmosphere is:*

*“The layer of air that surrounds Earth.” [Show the picture on page 4 of the sky and the clouds and tell students that that is the atmosphere.]*

*Let’s read the definition again and discuss what the definition tells us. [Discuss the definition. Explain that atmosphere is a noun and that represents something that is very big and that we can’t actually see. The atmosphere is made of different type of gasses and if the planet Earth didn’t have an atmosphere life could not be possible. The Earth’s atmosphere contains important gasses that allow people, animals, and plants to live.]*

4. Engage students in “deep-processing activities” with the word.

*Now, we are going to play more with the word atmosphere. Let’s answer yes or no to these questions using our “True” or “False” cards.*

*Make sure you wait and think about the word atmosphere before raising the correct card.*

*I would love to give my mother a piece of atmosphere for her birthday.*

*The spaceship crosses the atmosphere on its way to the moon.*

5. Model to students and scaffold their creation of powerful sentences.

*Now, we are going to practice making powerful sentences.*

*A powerful sentence with the word atmosphere is:*

*Clouds are formed in the atmosphere.*

*Now, it is your turn.*

*Think about the things that you know about the word atmosphere. Think about other atmosphere that you know.*

*Put a sentence together in your mind.*

*Be prepared to share it with your partner.*

*Now, tell your partner your sentence.*

## Wrap-up

- Provide comprehensive and systematic vocabulary instruction that teaches words and their extended meanings.
- Provide multiple opportunities to use and practice key vocabulary.
- Assure that knowledge of words is an ongoing part of the instructional day.
- Provide students opportunities to use oral language and to read and listen to text.

# Comprehension

- **The process of getting meaning from spoken language and/or print.**
  - We use schema, our organized knowledge of the world or we create a new model as we read; situation or mental models.
- Why is it important?
  - Through comprehension, meaning is constructed and students begin to read to learn.
  - Children can be taught comprehension strategies.
  - Comprehension instruction improves reading achievement and academic success.

# Meta-cognition

- Awareness of one's own learning and understanding.
- It is critical to all learning.
- Students learn to question themselves to monitor their understanding.

# Self-questioning

- Stop and ask:
- Does this make sense?
- Do I know what the words mean?
- Can I picture in my mind what is happening?
- What do I think will happen next?

Once students develop an understanding of their own learning, they can use strategies.

# Reading comprehension

- Before
  - Predict
  - Activate or build prior knowledge
- During
  - Self-monitor
  - Verify predictions
- After
  - Summarize
  - Generate questions

## Set purpose and goal

- Identifying the purpose tells students why they are reading.
- Purpose can be personal or instructional
- Text structures can help you determine what the purpose of the text:
  - Narrative
  - Expository

# Predicting

- Knowing the text structure can help students predict.
  - What do you think this will be about?
  - What do you think will happen?

## During-reading strategies

- Reread the sentence or paragraph
- Read ahead to the next sentence or two
- Retell in your own words what was just read
- Think and connect to what I already know
  - This reminds me of...

## After reading: Summarizing

- Who or what is the paragraph about?
- What is the most important information about the who or what?
- Combine the two pieces of information into a main idea statement with 10 words or less.

# Questioning

Who? What? Where?

- Focus on information on the page.
- Rephrase the text
- Recall facts, events, names

Why? How? What if?

- Analyze characters motives and emotions
- Focus on concepts
- Move toward inferences

# Questions

- Explicit
  - Can be found in the text
- Implicit or inferential
  - Derived from reader's knowledge and text

## Comprehension: Text structure

- Teaching narrative story structure
  - Story maps with topic/title in a circle on the middle of the page, and subtopics in surrounding circles.
- Teaching text structure: for example, main idea, compare-contrast, classification. How is the text organized?

# Narrative think sheet

- Title:
- Beginning:
  - What is the setting?
  - Who are the characters?
- Middle:
  - Action, what is the problem?
- End:
  - How was the problem solved?

## Wrap-up

- The emphasis on these components will vary based on what is already in place but all components are necessary.
- Focus on building students' use of strategies.
- This leads to independent learning.
- Once students learn to read, the emphasis is on reading to learn.

<b>Instructional Component</b>	<b>Objective</b>	<b>Activities</b>	<b>Lesson Components</b>
<b>Fluency</b>	Automatic recognition of words in isolation and in connected text.	Partner reading (student-adult or student-student) Choral reading Tape assisted reading	<ul style="list-style-type: none"> <li>• Provide a good and explicit model</li> <li>• Provide opportunities to reread text</li> <li>• Students reread text no less than 3 times</li> <li>• Establish performance criterion</li> </ul>
<b>Phonological Awareness</b>	Students are able to manipulate phonemes.	Blending, segmenting of words at phoneme level with or without support	<ul style="list-style-type: none"> <li>• Focus on 1 or 2 types of manipulation (e.g. blend and segment)</li> <li>• Use print</li> <li>• Provide opportunities to respond individually and as a group</li> <li>• Can use manipulatives</li> </ul>
<b>Phonics and Word Study</b>	Students apply sound symbols correspondences to read words accurately and fluently. Students can use decoding strategies to read unknown words.	Blending of sounds to read words Reading of decodable text Word and sentence dictation	<ul style="list-style-type: none"> <li>• Reading in books contain words students have learned</li> <li>• Students have opportunities to use decoding strategies</li> <li>• Patterns and rules are introduced systematically</li> <li>• Sounds are combined to form words</li> </ul>
<b>Comprehension</b>	Students use comprehension strategies before, during, and after reading text to construct meaning.	Students engage in comprehension strategies such as: Predicting, activating background knowledge, self-questioning, and self-monitoring, answering and generating questions	<ul style="list-style-type: none"> <li>• Model use of self-monitoring and comprehension strategies.</li> <li>• Provide opportunities to use self-monitoring and comprehension strategies</li> </ul>

# Professional development

- Purpose
  - Build teacher knowledge
  - Improve teacher practice
  - Improve student outcomes

# Professional development

- Teachers need professional development in effective assessment and instructional practices.
  - Assessment
    - To determine what student do and do not know
  - Instructional Design
    - To plan instruction
  - Reading Instruction
    - To build knowledge and implement the most effective practices

# Professional development

- To be effective, professional development models must:
  - Be of sufficient duration and span
  - Include both traditional workshops and in-class follow-up
  - Be coherent
  - Include collective participation

# Linking assessment, instruction, and professional development

- Changing teacher knowledge and practice to improve student outcomes is a cyclical process that evolves over time.
- Professional development provides the knowledge and skills that teachers need to improve their practice.
- Assessments provide the evidence that the change in practice is having a positive effect on student learning.

# Linking assessment, instruction, and professional development

As teachers begin to see the effect of the new practices, they are motivated to learn more.

# Implications

- Have a plan for building teacher knowledge and practice.
- Focus on those areas that will have the most impact first.
- Add additional components as teachers begin to master new practices and demonstrate command of new knowledge.

## Wrap-up

- Professional development is critical to teacher change and improvement of student outcome.
- The most effective professional development includes both workshops and follow-up; are provided over time to provide teachers time to implement and practice new techniques; and are coherent with country standards.

# Assessment

- Use assessment to evaluate efficacy of professional development and improved practice on student outcomes.
- The assessment results can be used to identify need, allocate resources, and modify instruction.

# Conclusion

- This is a cyclical and systematic process.
- Linking assessment, instruction, and professional development to improved outcomes is critical.