Comprehension: The Key to Reading to Learn

2015 Global Education Summit
@USAIDEducation
#LetGirlsLearn #endpoverty
Reading Comprehension across Grades and Gender (2014)

Grade 1: 43% Overall, 44% Boys, 42% Girls
Grade 2: 25% Overall, 24% Boys, 26% Girls
Grade 3: 16% Overall, 16% Boys, 17% Girls
Reading Comprehension across Grades and Gender (2015)

<table>
<thead>
<tr>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>Boys</td>
<td>Girls</td>
</tr>
<tr>
<td>50%</td>
<td>50%</td>
<td>51%</td>
</tr>
<tr>
<td>42%</td>
<td>46%</td>
<td>38%</td>
</tr>
<tr>
<td>33%</td>
<td>32%</td>
<td>34%</td>
</tr>
</tbody>
</table>
### Reading Band Distribution by Grade and Gender

<table>
<thead>
<tr>
<th>Grade</th>
<th>Gender</th>
<th>Band 1</th>
<th>Band 2</th>
<th>Band 3</th>
<th>Band 4</th>
<th>Band 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 3</td>
<td>Male</td>
<td>5%</td>
<td>21%</td>
<td>41%</td>
<td>26%</td>
<td>7%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>5%</td>
<td>20%</td>
<td>39%</td>
<td>28%</td>
<td>8%</td>
</tr>
<tr>
<td>Grade 5</td>
<td>Male</td>
<td>0%</td>
<td>4%</td>
<td>19%</td>
<td>53%</td>
<td>24%</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>0%</td>
<td>3%</td>
<td>20%</td>
<td>51%</td>
<td>25%</td>
</tr>
</tbody>
</table>

Source: National Student Assessment (2013), Directorate of Primary Education, Ministry of Primary and Mass Education, Bangladesh
Percentage of Second Graders Scoring Zero in Reading Comprehension

- Zambia (Cinyanja): 79% (2015)
- Dem. Republic of the Congo: 76% (2014)
- Tanzania: 40% (2014)
- Yemen: 81% (2012)
What does it Take to Comprehend a Text?

Directions: Read the text on the following slide. After reading, ask yourself the following:

1. Did I comprehend the meaning of the text?

2. What made the text difficult or easy to understand?

3. What strategies did I use to help me comprehend?
The Batsmen were merciless against the Bowlers. The bowlers placed their men in slips and covers. But to no avail. The Batsmen hit one hour after another along with an occasional six. Not once did their balls hit their stumps or get caught.
How does Vocabulary Affect Reading Comprehension?

“It seems very pretty,” she said when she had finished it, “but it’s rather hard to understand! Somehow, it seems to fill my head with ideas – only I don’t exactly know what they are!”

Alice, from Alice in Wonderland
The Jabberwocky

Twas brillig, and the slithy toves
  Did gyre and gimble in the wabe:
All mimsy were the borogoves,
  And the mome raths outgrabe.
Learning a Language is Developmental

- Birth to 1 year
- 1-2 years
- 2-3 years
- 3-4 years
- 4-5 years
- 6-8 years
- 9-12 years
- 13 years and up
Context Processor

Phonological Processor

Meaning Processor

Orthographic Processor

Vocabulary

Concept & Information
Sentence context
Text Structure

Phonemic Awareness

speech sound system

Phonics

speech output
writing output

Fluency

letter memory

reading input

writing output

reading input
7 Components of Language

- Phonology—Sound of language (phonemes)
- Morphology—Units of meaning in words; the way words are formed
- Syntax—Phrase and sentence structure (grammar)
- Semantics—How language conveys meaning
- Pragmatics—Word choice and use in context to communicate
- Orthography—Spelling patterns
- Vocabulary—Knowledge of meaning and pronunciation of words (lexicon)
What Is Listening?

- The ability to interpret and attach meaning to information received through the phonological processor, and to formulate a response.

- The ability to attribute meaning, depending on both the lexicon used and the ability to visualize.

- Aural (listening) comprehension is key to reading comprehension and written composition.
The Simple View of Reading

Language Comprehension x Decoding = Reading Comprehension

(Gough & Tummer, 1986)
What Do You Use To Activate Listening Comprehension?

Language Ability + Background Knowledge
3 Tiers of Vocabulary

- Tier 1: Frequently used; commonly known words; know and understand instantly; don’t require instructional support
- Tier 2: High frequency words; act as “connective tissue” in sentences; more abstract; need instructional support
- Tier 3: Low frequency; content or domain-specific; may not be understood even with instructional support
Word Poverty: Why is Daily Reading Important?

1 minute or less

8,000 words per year

5 minutes

282,000 words per year

20 minutes

1,800,000 words per year

Parent Handout Loudon County School District
LETRS 2003 Louisa Moats
Pathways to Reading Comprehension: Background Knowledge/Schema

Family

Religion

Cooking
What is Background Knowledge, or Schema?

• Schema theory is an explanation of how readers use prior knowledge to comprehend and learn from text (Rumelhart, 1980).

• The meaning one gleans from a text involves the interaction of the knowledge and skills of the reader and the message conveyed by the text.
Links Between Background Knowledge and Content

Knowledge of the world
- Knowledge of family, daily events, institutions, places, or cultural traditions
- Helps children understand narratives: stories, plays, biographies and novels

Knowledge of text
- Knowledge of the ways different types of texts are organized
- Children usually need more help developing knowledge of expository texts

Knowledge of subject matter
- Knowledge of math, science, history, geography and other subjects
- Most of this knowledge comes from formal learning, but may also come from day-to-day life
## Solutions: Explicit focus on vocabulary

### What insects do you know?
- bugs
- *formiga*
- ant
- spider

### Where do insects live?
- ponds
- swamps
- grass

### What are the body parts of an insect?
- *pernas*
- feelers
- wings
- head

### What other insect words do you know?
- *ovos*
- eggs
- hatch

### Draw a picture of an insect from the story.
![Ant](https://example.com/ant.png)

### Read the name of the insect.
- *ant*

### Listen to the name of the insect. Say the first sound of its name.
- *a*

### Write the name of the insect.
- *ant*
Solutions: Linking Events, Experiences, and Themes in Non-Fiction Texts

- Biodiversity Film
- Nutrition Film
One day, the ants went out looking for food. As they walked, they came upon a large tree with strange leaves. The leaves all had 3 sides and 3 angles. They were two different kinds of triangle leaves- equilateral triangles and right triangles!

<table>
<thead>
<tr>
<th>Write the name of the insect in the story.</th>
<th>Draw a picture of the leaf the ants are carrying.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ant</strong></td>
<td><img src="image.png" alt="Triangle" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How many sides do the leaves have?</th>
<th>Write the name of the shape with 3 sides.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image.png" alt="Tree" /></td>
<td><img src="image.png" alt="Triangle" /></td>
</tr>
</tbody>
</table>
Recommendations

1. Systematically and repeatedly teach content area vocabulary and concepts using a variety of instructional activities and texts.

2. Choose texts that align with content objectives and are appropriate for language and literacy goals.
Recommendations (cont.)

3. Plan to conduct concrete activities to draw out and build upon student background knowledge (in any language) so that they can make connections to texts.

4. Strategically use aids (such as semantic maps) to help students bridge language & literacy and content.