



New York State Migrant Education Program

Session 2 – Text: Determining information that transfers

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Objectives - Overall

- The learner (1), text/material (2), teacher (3-7)
- LEARNER: Comprehension and learning
- TEXT: Layers of complexity
 - What makes texts or content complex?
 - What matters? Where is our focus?
- TEACHER: The importance of teaching to support transfer; vocabulary, materials, comprehension skills, and writing skills

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Objectives – This Session (2)

- Review memorizing and learning
- Review comprehension and how learners process information
- Connect the learner with the text
 - Surface features
 - Deep structure
- Introduce aspects of TEXT: Layers of complexity and what transfers
 - What makes texts or content complex?
- Examine examples of big ideas in social studies – civics and history
- ***See glossary for terms and explanations

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Review From Last Meeting

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Learner: Memorization vs. Learning

- Memorization is often a default
 - Information committed only to short-term memory is fleeting; students attempt to remember details/facts.
- Information must integrate with information in long-term memory
- Background knowledge (prior knowledge) is needed

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The Importance of Knowledge

“When students do not have the knowledge necessary to comprehend a particular text, such knowledge needs to be built; **one cannot activate what is not there, and one cannot strategize about things one does not know.**”

• - Dr. Julie Leamed, Dr. Darin Stockdill & Dr. Elizabeth Moje "Integrating Reading Strategies and Knowledge Building in Adolescent Literacy Instruction"

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Comprehension

- Surface (exact wording)
- Text-Based Representation (what the text says)
- Situation Model (what the text means)
 - Students' prior knowledge

(Kintsch, 1998)

- **Learning is the result to constructing and integrating information with prior knowledge**

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Why Prior Knowledge Matters

- Increases processing speed
- Focuses attention
- Enhances inferencing
- Facilitate comprehension
- Promotes transfer

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Transfer

- Ability to "treat" a new concept, problem, or phenomenon as similar to one(s) they have experienced before.
- Transfer can also be "*Initial learning followed by reusing or applying what was learned.*"
- (Chi & VanLehn, 2012)

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Relevance

- Information can be applied to personal interests, contexts, or cultural experiences of students (personal relevance)
- Information can be connected to real-world issues, problems, and contexts (life relevance)
- Teachers can set learning goals and guide attention to relevant information

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Background and Prior Knowledge

- Students' prior knowledge supports comprehension and learning.
 - Comprehension fails when student do not yet have adequate background knowledge or do not access relevant prior knowledge (Bransford, 1984)
 - Access **relevant** knowledge: relevance instructions or attention redirection (McCrudden & Schraw, 2007)

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Questions or Comments?

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LEARNER and the TEXT

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Comprehension - Text

- WE KNOW:
 - Explicit text information supports students' comprehension of what the text says (text-based representation)
 - Text includes underlying information to support students' comprehension of what the text means (the situation model)
- WE NEED TO:
 - Determine information students need to know that leads to learning and transfer
 - Make connections between transferable text information and students' prior knowledge.

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TEXT - Surface Features

- Surface features (e.g., events, facts) are directly stated
 - Montgomery Bus Boycott, women's suffrage, the Boston Tea Party
 - Facts such as the three branches of government
- When students understand the surface features, **they comprehend what the text says.**
- When students only attend to the surface features, they can use the information again when they encounter similar factual information
 - Students learn about the Montgomery Bus Boycott and recognize this bus boycott when they encounter the same event in a new instructional setting.

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TEXT - Deep Structure

- Students apply the information from the surface features as cues that lead them to determine the deep structure of text
- First, students must recognize and understand the important ideas from the surface features:
 - Colonists were angry because they were paying taxes without representation so they tossed the tea into the harbor.
- Then they use these explicit ideas to determine the deep structure (or implied information) --- in this case, the **concept** of rebellion.
 - The deep structure often pertains to what the text means.

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Questions or Comments

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What is a Concept?

- Concepts are abstract, implicit, and often unstated.
 - Mental representations of a person's "organized information about objects, events, actions, qualities, or relationships" (Klausmeier, 1992, p. 268) and include ways of thinking, feeling, or behaving (Parker, 2009).
- The event of refusing to ride the bus is not the idea that can be applied when learning about the Boston Tea Party or women's suffrage.
 - The concept of rebellion is at the deep structure and is essentially the meaning of these events.
- Written and spoken discourse include many abstract concepts.
 - Rebellion, representation, immigration, governance...
 - Habitats, adaptation, water cycle...
 - Greed, honesty, acceptance...

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Fifth-Grade History Lesson

- Marie spent approximately *eight weeks* teaching her fifth graders about the westward expansion and life in the 1840s. Following instruction, she assessed her students and closely examined their responses to questions about the concepts of migration and conflict in contemporary events. After learning about the westward expansion, could her students *transfer* their newly acquired knowledge to new content (Nicaraguans' immigration to the United States)? She determined that her students had difficulty generating the reasons for conflict and the reasons for migrating (e.g., economic, political, religious). The information was not accessible beyond students' knowledge of the westward expansion. Marie asked, "I taught it, but why didn't they learn it?" (Ferretti, MacArthur, & Okolo, 2007).

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Fourth-Grade Science Lesson

(Keeley, Eberle, Dorsey, 2008)

Does it Have a Life Cycle?		
Frog	Cow	Daisy
Butterfly	Mushroom	Chicken
Grasshopper	Grass	Maple Tree
Fern	Earthworm	Human
Shark	Snail	Beetle
Bean Plant	Mold	Crab
Snake	Spider	Moth

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Students' Conceptual Knowledge

- Students **require prior knowledge of the concepts in order to comprehend** what the *text means*.
- The problem occurs when students have not yet learned an important concept.
- Without adequate prior conceptual knowledge, their comprehension of the information remains only of what the text says (or textbase).

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Facts Connected to Concepts

- Students require a “firm foundation of factual knowledge ordered around the key concepts of the discipline” (Lee, 2005, p. 31).
 - Factual information organizes around concepts
- If students *understand* the recurring nature of rebellion (e.g., civil rights’ movement, women’s rights, migrants’ rights), this conceptual knowledge supports learning factual knowledge of the Boston Tea Party.
- If students, however, do not understand the concept of rebellion and the recurring nature of rebellion, new factual information about the Boston Tea Party remains disconnected.

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Learning Conditions

- Students comprehend, learn, and are then able to apply (i.e., transfer):
 - (1) students require prior knowledge of the concepts.
 - (2) students need to know to look for the deep structure
- When students determine the deep structure of the text (concepts) and comprehend what the text means (construct a situation model), they are then likely to determine that the Boston Tea Party and the Montgomery Bus Boycott are both examples of rebellion.

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Application: The BTP passage

- What are the surface features?
- What are the deep structures (concepts)?

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Layers of Text Complexity

See handouts

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Tim Shanahan – Text Complexity

- Listen for 2 levels: Quantitative and Qualitative
- What is the advantage of students' prior knowledge?
- <https://www.youtube.com/watch?v=tPXLAXspFHI>

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Passage

Using the 4th-grade passage, "A Tea Party in Boston" and the templates, identify challenges an elementary-grade student may encounter

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Text Complexity

Purpose	Structure	Language	Knowledge	Other

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One Instructional Goal to Build Knowledge

- Identify “core concepts that organize our understanding” of content and determine “concrete cases that will allow students to master these concepts effectively”
- (Donovan & Bransford, 2005)

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CIVICS

Governance: Balance of Power and the Electoral Process

Citizenship: Citizen’s Rights and Responsibilities
(Lord & Noel, under review)

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GOVERNANCE	
NAEP content or concepts	Specific concept
Three Branches of Government Rules and Laws: Purpose, who is protected; the process of law making Role of local government Functions of state Government US Constitution Declaration of Independence Roles of US President Roles of the Supreme court Peace Treaties United Nations – peace-keeping, purpose and plan	
Citizens vote and why it is important Relationship of democracy and voting Majority decides Term of office Political parties Name current president	

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CITIZENSHIP	
NAEP content or concepts	Specific Concept
Explain citizen's responsibilities and good citizenship Meaning of civic duty Defacing public property Dress rules Volunteerism Knowledge patriotic symbols and holidays: Statue of Liberty Independence Day Memorial Day Pledge of Allegiance MLK, Jr. – I Have a Dream speech	
Exercise of a right Rights of US Citizens and Noncitizens Freedom of Assembly Discrimination Right to Legal Council Freedom of Speech	

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HISTORY

Conflict: War and Rebellion
 Movement: Migration and Immigration
 Discovery: Exploration and Invention

(Lord, Noel, & Slevin, 2016)

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CONFLICT	
NAEP content or concepts	Specific concept
American Revolution	
Civil War	
World War II	
Cold War	
Communism	
Vietnam	
Military recruitment and spending	
Boston Tea Party; Shay's Rebellion	
Underground Railroad	
Women's voting rights	
Civil rights	
Workers' rights	
Child labor	
Political rights	
Protest methods	

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MOVEMENT	
NAEP content or concepts	Specific Concept
Pilgrims	
English settlement	
European settlers	
Puritans	
Southwest missions	
Spanish colonies	
Slave trade	
US immigration: Early 20 th century Europeans	
Ellis Island and the Statue of Liberty	
Native Americans	
Colonies	
Westward expansion	
US settlements	

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DISCOVERY	
NAEP content or concepts	Specific Concept
Early European exploration	
Lewis and Clark	
Lunar exploration	
Benjamin Franklin	
Elizabeth Fuller	
Inventions change lives	

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Summary

- Learner processes information: Text-based (what the text says) and situation model (what the text means)
- Text presents information: Surface features (stated) and deep structure (unstated concepts)
- Learner – requires prior knowledge of the concept and must attend to relevant information so that transfer occurs
- Text has layers of complexity
- Instruction in civics and history provide many opportunities to build knowledge of recurring transferrable concepts

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Next Session: TEACHER

- Examples of concepts in Science and ELA
- **Depth of instruction**
- **Breadth of instruction**
 - Concept mapping across ideas
- **Reduce cognitive load**
- **Revisit relevance**
- **Establish purpose**
 - Real-world application

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