

Teaching and Assessing Understanding of Text Structures across Grades

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Text Structures are the organizational structures used within paragraphs or longer texts, appropriate to genre and purpose. Examples of text structures include: sequence/process, description, time order/chronology, proposition/support, compare/contrast, problem/solution, cause/effect, inductive/deductive, and investigation. Research in literacy learning over the past two decades indicates that: a) an understanding of various text structures and their purposes enhances student's ability to comprehend what is read; and b) that some text structures are more easily learned and understood before other more complex structures.

The benefits of text structure instruction for reading comprehension have strong empirical support. Research also supports the causal relationship between text structure instruction and improvement in composition skills.

Dickson, Simmons, Kame'enui, 1995

What the research says...

- Knowledge about the ways different types of text are structured and the ways these structures reveal the organization and interweaving of the author's ideas have been shown to influence **comprehension, memory, and writing/composition skills**.
- **Proficient readers** use awareness of text structures to understand key points of the text. When they are asked to recall what they have read, their summaries reflect the text organization.
- **Less experienced readers**, apparently unaware of text structures, have difficulty organizing and prioritizing text information. Often, students who can follow a typical narrative are bewildered by expository text structures.
- **Expository texts** often rely on scientific discourse, characterized by (a) complex sentences containing multiple embedded clauses; (b) verbs that have been turned into nouns representing large disciplinary concepts; and (c) Latin and Greek derived vocabularies.
- When students are taught to identify text structures, through use of such supports as graphic organizers, writing frames, text pattern signals, or text previewing, their **comprehension** increases.
- **Use of graphic organizers and writing templates/frames** help readers to identify relationships between and among ideas: to organize information; to identify how facts relate to main ideas; and to retain information. (See sample template on page 5.)
- When retelling stories in narrative texts, **diverse learners** (students with learning disabilities) appear to recall less information than their normally achieving counterparts. They display difficulty understanding characters in stories (e.g., interactions, motivations) and making inferences.
- When reading content area texts, **diverse learners** have difficulty distinguishing between relevant and irrelevant information; identifying interrelationships between main ideas; organizing information; and memorizing and retaining isolated facts.
- **Explicit text structure** facilitates reading comprehension; yet many textbooks are poorly organized or fail to be explicit. Well-presented text enables readers to identify relevant information, including main ideas and relations between and among ideas. General education students (elementary through college) demonstrate difficulty analyzing main ideas of textbooks, especially when main ideas are implied rather than clearly stated.
- Well-structured expository text facilitates **understanding of main ideas**, rather than facts.

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Types of Paragraphs/Text Structures

Generally speaking, the text structures below are presented in order of increasing complexity, although this is NOT meant to be a linear sequence. Other factors, such as explicitness of ideas presented, structural and semantic cues in text, length of text, vocabulary “load,” level of reasoning required to understand ideas presented, and the reader’s “knowledge of the world” also influence overall comprehension of text.

1. **Sequence (Process) Structure** – In this pattern, steps or phases of a process or project are specified without cause-effect relationships being implied. A recipe or procedure for a science investigation would be examples of differing complexity.
2. **Time Order/Chronology** – This pattern is found in most narrative texts, where the plot unfolds over time. More complex texts use literary devices, such as flashback and foreshadowing to implicitly establish time order/chronology.
3. **Events/Enumeration/Description Structure** – This pattern usually covers a larger piece of writing rather than a single paragraph. An introductory paragraph is provided which states the topic and facilitates the listing or elaboration of important descriptions, characteristics, or attributes.
4. **Definition Structure** – Typically this pattern includes a “definition” and examples of class membership/type, attributes, and functions. It may also include the parts and the relationship between the parts or structure and function. In some instances, it will include ways something is similar to or different from other things.
5. **Compare-Contrast Structure** - This pattern shows similarities and dissimilarities between objects, actions, ideas, or processes. Headings and subheadings generally provide extra support/signals to readers about this structure. Often one paragraph is dedicated to similarities and another to differences.

“Top-level Structures” requiring a more holistic understanding of ideas presented

6. **Cause-Effect (Antecedent-Consequence) Structure** – Unlike the sequence pattern, this pattern carries the implication that the effect is produced by a specific cause or that the consequences follow from the specified antecedents. This might be found in a discussion of science investigation results or historical articles linking multiple causes and effects.
7. **Problem-Solution (Hypothetical) Structure** – This pattern may follow a number of different forms. At one extreme, the problem and solution are labeled as such. At the other extreme, the pattern is a series of questions and answers that may or may not lead to a resolution of the problem or issue.
8. **Proposition-Support (Persuasion)** – This is similar to problem/solution, although arguments and counter arguments are both presented in support of a thesis statement.
9. **Judgment/Critique Structure** – This pattern uses a set of criteria to evaluate information or ideas that have been presented. Often discourse style (e.g., humor, satire) affects the complexity and understanding of this type of text.
10. **Inductive/Deductive Structure** – There are subtle differences between these two structures, which apply elements of enumeration and definition structures. A deductive structure first presents a generalization/ definition and then follows it with specific examples; conversely, an inductive structure presents illustrations and examples and then

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moves the reader to draw a conclusion from the examples. These structures are often embedded within cause/effect, proposition/support, and judgment/critique structures.

Text Pattern Signals are words or phrases embedded in texts which help to indicate – or signal – the organizational features of the text and indicate to the reader where the text *may be* “heading.” Signals, *in combination with the context of their use*, determine text structure – not signals alone (Vacca & Vacca, 1989; Seidenberg, 1989). As seen in the chart below, text features and semantic cues – phrases found in key sentences, such as explicit topic sentences and thesis statements – also signal readers about text structures and organization of information.

Typical Text Pattern Signals for Different Text Structures

Karin Hess, 2006

Event Enumeration Description/ Definition	Sequence/ Process	Time Order/ Chronology	Compare-Contrast Proposition-Support Judgment/Critique	Cause-Effect Problem-Solution
also	after	afterwards	although	accordingly
to begin with	at the same time	as	as well as	as a result
first	before	before	but	because
second	finally	initially	either...or	consequently
next	first	later on	however	if...then
finally	following that	meanwhile	in contrast	furthermore
in fact	last	much later/earlier	in fact	for this reason
then	next	not long after	on the other hand	may be due to
most importantly	second	now	not only...but also	nevertheless
for instance	then	on (date)	while	therefore
for example	third	previously	unless	thus
to illustrate	simultaneously	simultaneously	similarly	reason why
characteristics include		soon after	the facts show	since
such as		when	if...then	so that
in addition			for example	the effect of
besides			yet	this led to
			same as/different from	to begin with
			as opposed to	
			both	
			whereas	
Also use of diagrams, inset text definitions	Also use of bullets, numbering, outlining, white space, arrows	Also use of timelines, dates, white space, subheadings, chapter titles	Also use of charts, graphs, graphic organizers, subheadings	Also use of charts, graphs, timelines, flowcharts, graphic organizers
Also, semantic cues in introductory sentences and paragraphs: “This is a story about...” or “This report will describe what/how...”	Also, semantic cues in topic sentences: “... is a long and difficult process.”	Also, semantic cues introductory or closing paragraph (e.g., flashback, forward, epilogue, and chapter titles)	Also, semantic cues in thesis statement or introductory paragraph	Also, semantic cues in key sentences: “the problem is;” “... is a dilemma;” “a reason for this problem is...”

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Use of Graphic Organizers for ...

- **Instructional Support:** How could you graphically depict the different text structures listed? When introducing a graphic organizer, “match” the specifics of the graphic to the text/passage example you are using. For example, if there are 4 steps in the process, don’t give students a generic graphic organizer with 5 boxes. Begin with text-specific organizers, next move to helping students adapt the organizer for different situations/texts, and later generalize/transfer use of graphic organizers for note taking when reading or as a prewriting activity for planning ideas for written responses.
- **Assessment:** Ask students to graphically organize central ideas and supporting information in a text passage to assess their understanding of how information is connected. Ask students to use information from the text to “fill in” graphic organizers to assess their comprehension. A key to conceptual understanding when using graphic organizers is to write how or why they are connected (e.g., this “leads to” or this “was caused by” or this “describes” that).

Use of Text Signals for...

- **Instructional Support:** Take some time to find different text passage types that can be used for instructional purposes to illustrate text signals and text structures. Newspapers are a good source for event and proposition/support texts (editorials). Short magazine articles are often good sources of text examples for events, proposition/support, cause/effect, and problem/solution text structures. Instruction manuals, game rules, and science experiments/procedures provide good models for sequence text structures. Subject-specific texts are filled with examples of description, event, enumeration, compare/contrast, and problem/solution text passages.
- **Assessment:** Ask students to identify the text structure of a passage and provide text-based support for their determination of that structure. Support for responses would include text signals used, transitional devices (numbering, bullets, white space, etc.), and the organizational patterns of the text.

Use of Text Features and Text Structures for...

- **Instructional Support:** Take some time to find different text types that can be used for instructional purposes to illustrate text features and their purposes within text structures. Identify texts with pictures that have captions that ADD new information to the written text. Identify semantic cues that signal text structures.
- **Assessment:** Ask students to identify the text structure of a passage and provide text-based support for their determination of that structure. Support for responses would include text signals, transitional devices and their purposes (numbering, bullets, white space, etc.), text features (headings, bold text, etc.), the organizational patterns of the text, and semantic cues. Have students use post-its to annotate a text’s features and describe each feature’s use/purpose in that text.

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Use of Frames/Templates for...

Instructional Support: A simple way to introduce each text structure is to have students use signal words and a template or frame (see below) to create different text structures or to summarize a text passage using a template. Over time, they will be able to create their own text structure examples and revise first drafts using other signal words.

Sample Text Structure Template: Compare-Contrast

Signal Words for Compare-Contrast			
although	in fact		the facts show
as well as	on the other hand	same as/different from	if...then
but	not only...but also	as opposed to	for example
either...or	while	both	yet
however	unless	whereas	
in contrast	similarly		

Sample template for writing using this structure:

_____ and _____ are the same

and different in several ways. They both _____

_____, as well as _____

_____.

Also, they both _____.

Although there are alike, they are also different. For example, _____

_____, while _____

_____.

Another way they are different is _____.

My conclusion is that they are more (different or similar) because _____

_____.

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Structures of Text – Continuum of Understanding of Sentences, Paragraphs, and Text Structures in Reading & Writing					
Underlined expectations indicate when first recommended to be used for assessment purposes, meaning that test items and texts with these structures have been introduced for instruction at <i>least one year prior</i> to when mastery is expected. A review of the literature on literary learning generally suggests the following curriculum continuum:					
End of Grade 3	End of Grade 4	End of Grade 5	End of Grade 6	End of Grade 7	End of Grade 8-HS
EXAMPLES: simple sentences	EXAMPLES: simple <u>and compound</u> sentences; paragraph	EXAMPLES: simple and compound sentences, <u>including phrases and clauses</u> ; <u>multiple</u> paragraphs	EXAMPLES: varied sentence structures; multiple paragraphs	EXAMPLES: varied sentence structures; multiple paragraphs	EXAMPLES: varied sentence structures; multiple paragraphs
Students demonstrate command of the structures of sentences and paragraphs by...					
<ul style="list-style-type: none"> Identifying and writing a variety of complete simple sentences (e.g., declarative, exclamatory, and interrogative) Recognizing complete sentences 	<ul style="list-style-type: none"> Writing a variety of complete simple <u>and compound</u> sentences <u>Applying the paragraph form, such as: indenting, identifying main idea/topic sentence and supporting details</u> 	<ul style="list-style-type: none"> <u>Using varied sentence length and structure to enhance meaning</u> (e.g., <u>including phrases and clauses</u>) Applying the paragraph form, such as: indenting, identifying main idea/topic sentence and supporting details <u>Recognizing organizational structures <i>within</i> paragraphs</u> (e.g., When given a paragraph and a list of text structures, students identify text structure used) 	<ul style="list-style-type: none"> Using varied sentence length and structure to enhance meaning (e.g., including phrases and clauses) Applying the paragraph form, such as: indenting, identifying main idea/topic sentence and supporting details Recognizing organizational structures <i>within</i> paragraphs <u>Applying a format and text structure appropriate to the purpose of the text</u> (e.g., Given a paragraph, students write the next paragraph, using appropriate and consistent text structure) 	<ul style="list-style-type: none"> Using varied sentence length and structure to enhance meaning Applying the paragraph form: indenting, main idea, supporting details Recognizing organizational structures <i>within</i> paragraphs <u>or <i>within</i> texts</u> (e.g., When given a paragraph <u>or text</u> and a description of text structures, students identify structure used) Applying a format and text structure appropriate to the purpose of the text 	<ul style="list-style-type: none"> Using varied sentence length and structure to enhance or <u>clarify</u> meaning (e.g., naming, providing anecdote/scenario, examples, etc.) Applying the paragraph form: indenting, main idea, supporting details Recognizing organizational structures <i>within</i> paragraphs or <i>within</i> texts Applying a format and text structure appropriate to the purpose of the text

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Recommended continuum of text structures when students are best able to demonstrate comprehension of ideas presented in texts and command of the structures when composing multi-paragraph narrative and expository texts.					
Explicit instruction in text structure and use of strategies, such teaching signal words, semantic cues, and graphic organizers enhance students' ability to organize information and understanding key ideas.					
End of Grade 3	End of Grade 4	End of Grade 5	End of Grade 6	End of Grade 7	End of Grade 8-HS
EXAMPLES (of text structures): sequence/process time order/ chronology description	EXAMPLES (of text structures): sequence/process time order/ chronology description	EXAMPLES (of text structures): sequence/process time order/chronology description <u>compare-contrast</u>	EXAMPLES (of text structures): sequence/process time order/chronology description compare-contrast <u>proposition-support</u>	EXAMPLES (of text structures): sequence/process time order/chronology description compare-contrast proposition-support <u>problem-solution</u> <u>cause-effect</u>	EXAMPLES (of text structures): sequence/process, time order/chronology, description, compare-contrast, proposition-support , problem-solution, cause-effect, <u>investigation</u> , <u>inductive/deductive</u> , <u>critique</u>
Examples of texts	Examples of texts	Examples of texts	Examples of texts	Examples of texts	Examples of texts

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Resources Referenced

Department of Education and Training, Western Australia. Beverly, MA: STEPS Professional Development:

[\[http://www.stepspd.com/us/index.asp\]](http://www.stepspd.com/us/index.asp)

First Steps Literacy 2nd Edition- Elementary Literacy (Grades K-5)

STEPS Middle and High School Literacy - Secondary Literacy (Grades 6-12)

Dickson, S., Simmons, D., & Kame'enui, E. (1995a). *Text Organization: Curricular and Instructional Implications for Diverse Learners*.

Dickson, S., Simmons, D., & Kame'enui, E. (1995b) "Text Organization and Its Relation to Reading Comprehension: A Synthesis of the Research."

University of Oregon. [online] available:

http://www.suite101.com/external_link.cfm?elink=http://idea.uoregon.edu/~ncite/documents/techrep/tech17.html

Grace, K. (1998, 2006). "Using the Text Structure of Written Language to Improve Reading Comprehension and Writing Clarity." Presentation at the Stern Center for Language and Learning, Williston, VT. [workshop information available at www.sterncenter.org]

Gruenewald, L. & Pollak, S. (1990). *Language Interaction in Curriculum and Instruction*, Second Ed. Austin, TX: PRO-ED, Inc.

Hess, K. (2008) "Tools & Strategies for Developing and Using Learning Progressions." Presentation at the FAST-SCASS meeting, Atlanta, GA 2/6/08 [online] PowerPoint available: www.nciea.org

Hess, K. and Biggam, S. (2004). "A Discussion of Text Complexity, Grades K-High School" published by NH, RI, and VT Departments of Education as part of the New England Common Assessment Program (NECAP) Grade Level Expectations for Reading. [online] available: www.nciea.org

Hill, B. C. (2001). *Developmental Continuums: A Framework for Literacy Instruction and Assessment K-8*. Norwood, MA: Christopher-Gordon Publishers, Inc.

New England Common Assessment Program (NECAP) Grade Level Expectations. (2004). New Hampshire, Rhode Island, and Vermont Departments of Education.

Pinnell, G. S. & Fountas, I. (2007). *The Continuum of Literacy Learning Grades K-8: Behaviors and Understandings to Notice, Teach, and Support*. Portsmouth, ME: Heinemann.

Seidenberg, P. L., (1989). "Relating Text-Processing research to Reading and Writing Instruction for Learning Disabled Students." *Learning Disabilities Focus*, 5 (1), 4-12.

State of Victoria, Department of Education and Early Childhood Development. Victoria, Australia [online] available: Reading Learning Progression:

<http://www.education.vic.gov.au/studentlearning/teachingresources/english/englishcontinuum/reading/default.htm>

Speaking and Listening Learning Progression:

<http://www.education.vic.gov.au/studentlearning/teachingresources/english/englishcontinuum/speaklisten/default.htm>

Writing Learning Progression:

<http://www.education.vic.gov.au/studentlearning/teachingresources/english/englishcontinuum/writing/default.htm>

Bindon, R., & Santeusano, R. (2006). *Reading to Learn: A Content Teacher's Guide*. Beverly, MA: STEPS Professional Development.

Vacca and Vacca, (1989). *Content Area Reading*, 3rd ed., HarperCollins Publishers.