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Thematic Organizers: Connecting the Known with the New

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Too often teachers prepare lessons that are predicated on students already knowing and understanding the content to be taught instead of from a perspective in which the student is viewed as having prior knowledge and/or experience with aspects of the target concept to be studied. In the first instance, the practice is connecting what is new to what is known; in the second order that should be followed is what is known to what is new. This difference is highly significant in the teaching/learning process. This paper describes the use of a thematic organizer designed to help students' preview text information and generate connections between their prior knowledge and text concepts.

It is difficult for students to connect what is new with what is known unless they first understand the new information so they can see how it fits with information that is known. Because texts are never completely explicit, the reader must rely on preexisting schemata to provide plausible interpretations. However, good and poor readers do not always use schemata appropriately or are unaware of whether the information they are reading is consistent with their existing knowledge. Thematic organizers have been found to be an effective way for engaging the reader with a text when a concept is either ill-defined or novel within a text (Alvarez, 1983, Alvarez, 1993; Alvarez & Risko, 1989, 2002; Risko & Alvarez, 1986). A thematic organizer is an adjunct aid designed to: (1) highlight systematically and explicitly the central theme of the text; (2) relate experiences and/or knowledge that the students already possess to a theme; (3) provide cohesion among the ideas to accommodate text structure; and, (4) aid schema construction by elaborating upon new and extended meanings of a thematic concept. A thematic organizer is a preview strategy developed by the teacher, and its purpose is to activate students' prior knowledge, relate this knowledge to the central theme of a selected passage, define the theme by explaining its attributes, and ask students to predict what will occur in the reading passage. A thematic organizer differs from other types of previews in that it is developed to define and relate the theme through analogy to clear, definitive, and familiar examples to the readers' background of experiences.

A thematic organizer presents information that is relevant to students' prior knowledge and revisits this information in a sequence of statements and restatements. This text adjunct seems to activate student ability to recognize and relate ideas that are common within both familiar and novel contexts (see Morris, Bransford, & Franks, 1977). In order to recognize the applicability of an idea to a new situation the student needs to know that the idea can be applied in different forms to various situations (Bruner, 1966). Extending students' prior knowledge of various attributes of thematic concepts before they read varied contexts is at least one way to facilitate ability to generate explanations for "new" information. This process of alerting students to common elements between their prior knowledge and concepts presented in varied contexts can reduce confusion and encourage the generalizability of knowledge. Thematic organizers can be developed to promote active participation by the student using pencil-and-paper formats or electronic interactive formats with the Internet.

Electronic Thematic Organizer

Thematic organizers can be presented electronically constructed by modifying a procedure developed by Alvarez (1980, 1983) and following the format of Risko and Alvarez (1986). Two cases have been written that appear on CDs that contain thematic organizers. One is a case on "Planetary Transits" and the other is "Water on Mars."

In a study with high school students a thematic organizer was written to provide cohesion by illustrating the common elements of the case "Water On Mars" using multiple contexts rather than to rely on students' spontaneous association which may or may not happen (Alvarez, Stockman, Rodriguez, Davidson, & Schwartz, 1999). Hyperlinks to related information about the target concept were included.

Following Ausubel's (1968) differentiation between types of advance organizers, it was decided that a comparative organizer would be used. It was planned that the thematic organizer would explain explicitly the theme (Water on Mars). As in Ausubel's (1960, 1968), it was written in prose and intended to activate the reader's prior knowledge and enable the reader to assimilate ideas that had previously been unrelated. The thematic organizer differed from Ausubel's organizer in that it was written on a level believed to be commensurate with the students' reading ability and included information that dealt specifically with the topic of the reader's experiential background. In addition, the thematic organizer was written to adhere to specified guidelines for organization and structure (see Alvarez & Risko, 1989; Risko & Alvarez, 1986).

Specifically, the thematic organizer for the case "Water on Mars" was written as follows: The first section contained three paragraphs, which compared the similarities of scientists and detectives according to the thematic concept (Water on Mars). Students are presented with a Situation/Problem that is intended to arouse curiosity with the target concept. The first paragraph "set the scene" by introducing the thematic concept in a setting believed to be relevant to the students' experience. A hyperlink was included to provide background knowledge to the reader/viewer about Martians on Mars and the radio broadcast "The War of the Worlds." The second paragraph presented several examples which further explained the fascination with the planet Mars, and its comparison with Earth. The third paragraph discussed the need for a careful study of the geological features on Mars. Students are asked to write any impressions they have about these features in their Electronic Notebook.

The next two paragraphs are developed as follows. The fourth paragraph contrasted the relationship between Earth and Mars and ended with a question "Did Mars have a warm past." The fifth paragraph gave the reader/viewer a precise and clear direction of what he or she was expected to know when the reading was completed. The reader/viewer was also asked to record their initial thoughts in their Electronic Notebook.

The second part of the thematic organizer was a set of six interpretive statements that presented attributes and non-attributes of the concept. Written directions were given asking the students to read these statements and select the ones that they thought were correct either during or after reading the Background information provided. The statements corresponded to the target concept. There was reason to believe that statements such as these would facilitate student ability to interpret information implied by the author of this passage (Alvarez, 1980, 1983; Risko & Alvarez, 1986). Responses to these statements by the students were analyzed by the teacher; and, subsequently, by the NASA scientist. This analysis was done in response to students' questions submitted in their electronic notebook and E-mail entries. Results indicated that these students were able to generate more literal and interpretive responses and that the thematic organizer served to activate their knowledge about Mars.

Thematic organizers have been developed by undergraduate, graduate, and preservice teachers for use in grades K through 12. Thematic organizers have also been used with college students. These organizers lend themselves for all content subject disciplines to prepare readers and viewers to learn with expository and narrative discourse.

Procedures for developing a thematic organizer appear in the appendix. The care with which a thematic organizer is developed enables readers to better make connections with what they know to forthcoming new information.

Conclusion

The thematic organizer presents information that is relevant to students' prior knowledge and revisits this information in a sequence of statements and restatements. This text adjunct seems to activate student ability to recognize and relate ideas that are common within both familiar and novel contexts (see Morris, Bransford, & Franks, 1977). In order to recognize the applicability of an idea to a new situation the student needs to know that the idea can be applied in different forms to various situations (Bruner, 1966). Extending students' prior knowledge of various attributes of thematic concepts before they read varied contexts is at least one way to facilitate ability to generate explanations for "new" information. This process of alerting students to common elements between their prior knowledge and concepts presented in varied contexts can reduce confusion and encourage the generalizability of knowledge.

Students can be taught to incorporate new information into their existing world knowledge. This can be accomplished through teacher guided instruction and self-initiated strategies that includes methods and meaningful materials that induce critical thinking with conceptual problems. In order for schema construction to occur, a framework needs to be provided that helps readers to elaborate upon new facts and ideas and to clarify their significance or relevance. Students need to learn more about themselves as learners. Notable in this learning context is the relationship between facts

and ideas learned in formal school settings and those encountered in everyday learning environments.

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APPENDIX

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Developing a Thematic Organizer

The teacher:

- 1. Estimates the nature and degree of conceptual difficulty presented by the prose or narrative of the reading.
- 2. Identifies the theme of the passage. This theme is generally implied by the author, and therefore has not been explicitly defined.
- 3. Writes a paragraph(s) which introduces the theme called a thematic concept to be studied. Sets the scene by introducing the thematic concept in a setting believed to be relevant to the students' experiences.
- 4. Writes a paragraph(s), which either clarifies or elaborates upon the thematic concept. The paragraph(s) should define the thematic concept and present an analogy between the ideas in the text and the experiences of the students. Ideas within this paragraph(s) can be linked to relevant Internet sites that provide additional information for the student to read, view, and/or listen.
- 5. Composes each paragraph of the thematic organizer to contain a topic sentence followed by sentences with supporting details. These sentences should be written using explicit connectives, words that relate ideas in one sentence to the ideas to another sentence.

Examples of explicit connectives are:

- 1. *Reference* (e.g., These poor people could not own their own land. *They* did not have much money for food or houses.)
- 2. *Conjunction* (e.g., The reformers were *also* called muckrakers.)
- 3. *Lexical* (e.g., The reformers tried to help people. *These reformers* wanted everyone to have a fair chance to make a living.
- 6. Asks students to make a prediction statement either orally or written concerning what they anticipate they will be reading. If written, students can note their thoughts and feelings in a journal, electronic notebook, or e-mail note for the teacher to respond.
- 7. Constructs statements that describe the thematic concept. At the end of each statement, paragraph number(s) are provided where the students can refer to make decisions concerning its relevance or irrelevance. Some statements may be linked to relevant Internet sites. The students are to place a check mark beside the statement with which they agree or to leave it blank if they disagree.