EFFECTIVE TEXT PROCESSING STRATEGIES
For All of My Courses

Name:	Craig A. Wendorf, Ph.D., Professor of Psychology
Location:	D240 Science Center, University of Wisconsin – Stevens Point
Contact:	cwendorf@uwsp.edu, 715-346-2304 (with voicemail)

Overview of Text Processing Strategies

Types of Text Processing Strategies

Text processing strategies can be defined as practices that build on known principles of the psychology of learning and memory to improve one's ability to learn from textbooks and other written material (Tuckman, 1993). Most students are familiar with one major class of text processing strategies – the outline. However, there are other effective methods. In order to fully realize the benefits of these text processing strategies, you will need to know the major elements and types of these text processing strategies; these are summarized briefly below and clarified more on the following pages.

A. *The Coded Elaborative Outline (CEO):* Outlines can be effective text processing strategies. However, effective outlines are not merely shortened versions of the written material. Effective outlines have a statement of purpose, summarize the underlying concepts and their relationships, and use both shortened and elaborated statements for each main point or idea.

B. *The Knowledge or Concept Map (CMap):* CMaps are graphic representations of the relationships between concepts (and various examples of different types of CMaps can be viewed at http://classes.aces.uiuc.edu/ACES100/Mind/c-m2.html). Like effective outlines, effective CMaps have a statement of purpose and summarize the underlying concepts and their relationships. While CMaps do not include elaborated statements for each concept, they instead offer a visually attractive presentation.

What Makes the Text Processing Strategies Effective?

Of course, the effectiveness of the text processing strategy depends on the quality of the product produced (like a CEO or CMap). Generally, the effectiveness of strategy is enhanced by following of three main guidelines:

1. The text processing strategy product ought to cover all of the necessary information. It should not cover everything, but should highlight the major concepts;
2. The text processing strategy product should have a valid structure that emphasizes the underlying conceptual relationships. Therefore, the product's structure may differ drastically from the written source that is being summarized; and
3. The text processing strategy product should label or explicitly code those underlying conceptual relationships. This is important because it provides strong, obvious reminders about the conceptual structure.

The simplest way to assess the quality of a product is to indicate whether each of the above guidelines has been implemented. That is, an effective product is complete and concise, logically organized (according to

relationships among concepts), and well-coded and elaborated (for CEOs especially). Unacceptable products are incomplete or needlessly complex, disorganized or illogical (i.e., do not emphasize conceptual *relationships*), and are incomplete in coding and relevant details.

A Taxonomy of Relationships Among Concepts

A taxonomy provides a pre-specified method for organizing information. Generally speaking, ideas should always be grouped to enhance your ability to recall them when necessary; how those ideas are best grouped depends on their underlying relationships. Following the work of Tuckman (1993) and Donald (2002), the table below describes the different types of relationships that exist between concepts:

Relationship and Definition	Sample Key Terms	Written Example of Relationship Type
Relationships based on Similarity		
Associative: Concepts are contiguous or correlated with each other	*Analogous; related; parallel; similar; equivalent*	"Text processing strategies like Coded Elaborative Outlines and Concept Maps are *similar* to each other."
Functional: Concept are related because of purpose or function	*Purpose; object; function; role; intention*	"Text processing strategies have the *purpose* of organizing the material that you read."
Structural: Concepts have a taxonomic or hierarchical relationship	*Part; kind; type; category; characteristic; component; element*	"A Concept Map is a *type* of strategy for learning from written material."
Evidentiary: Explanation of a concrete instance of a concept	*Example; evidence; instance; case*	"Donald (1992) provides an *example* of a coding system for concept maps."
Relationships based on Dependency		
Procedural: Concepts are ordered or sequenced as for steps or prerequisites	*Next; previously; steps; before; after*	"Text processing strategy products can be created using a series of *steps, beginning* with identifying the main idea or concept."
Logical: Concepts have a logical or conditional order	*leads to; builds on; if; then; conditional*	"The Coded Elaborative Outline *builds on* the traditional outline format."
Causal: Concepts have an explicit cause-and-effect relationship	*Causes; results; creates; produces; influences; impacts*	"Active organization of written material *results in* deeper learning of the material."
Critical: Explanation of the strength or weakness of a concept	*Problem; solution; advantage; disadvantage*	"Coded Elaborative Outlines have the *advantage* of being reasonably familiar."

In some cases, written material (like a textbook) has grouped concepts based on this underlying type of relationship; in other cases, it has not. Your job is to group the information based on these relationships and this principle is a necessity for all types of effective text processing strategies. Again, in many cases, the product's structure may differ drastically from the written source that is being summarized.
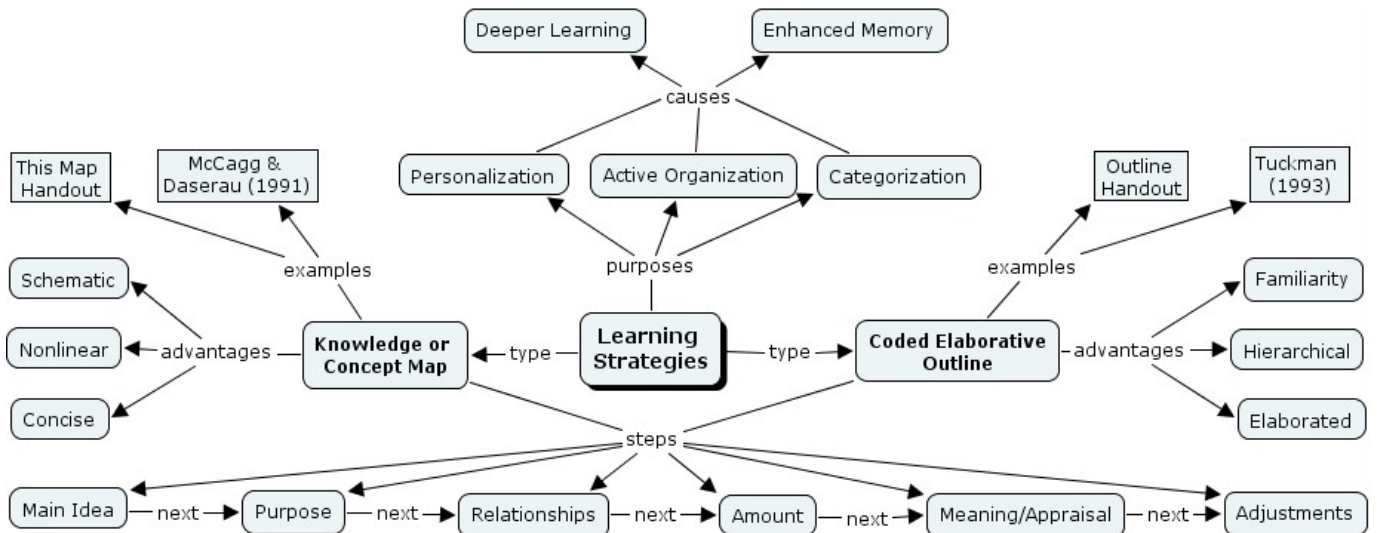
Example of an Effective Text Processing Strategy:
The Coded Elaborative Outline

Purpose of this Outline: Created by Tuckman (1993), the Coded Elaborative Outline (CEO) is a specialized type of outline. It is a text processing strategy that includes (a) the organized sequence of concepts important for and related to a main idea, (b) a coding of the concepts' relationships to the main idea using pre-determined organizational scheme, and (c) elaborations of each concept in the form of definitions or explanations. The CEO example below summarizes the main concepts and principles of text processing strategies.

I. ***Common Elements (Associative):*** Text processing strategies share purposes, effects, and steps
    a. *Purposes (Functional):* Why use a text processing strategy?
        i. Personalization: Allow you to use your own experiences to structure material
        ii. Categorization: Allow you see the main points better than just reading the material
        iii. Active Organization: Make you an "author" of the material rather than passive reader
    b. *Causes (Causal):* Educational research shows that following these strategies has advantages
        i. Enhanced Memory: Use of strategies has been shown to increase retention of material
        ii. Deeper Learning: Use of strategies has been shown to help you focus on main ideas
    c. *Steps (Procedural):* Products of the strategies should be constructed in the following sequence
        i. Main Idea: Screen text to find signals that serve as cues to the main concepts
        ii. Purpose: Main concepts are grouped into logical categories
        iii. Relationships: Categories and concepts are organized based on relationships
        iv. Amount: Main concepts and relationships should be labeled so that they are easily recalled
        v. Meaning and Appraisal: Elaboration and examples are included to enhance meaning
        vi. Adjustments: Changes are made to the product when necessary
II. ***The Coded Elaborative Outline (Structural):*** The CEO is a text-oriented text processing strategy
    a. *Examples (Evidentiary):* There are several examples of CEOs that are useful
        i. This Outline Handout: This handout is properly structured as a CEO
        ii. Tuckman (1993): Tuckman provides evidence of the effectiveness of CEOs
    b. *Advantages (Critical):* CEOs have several advantages relative to Knowledge Maps
        i. Familiarity: Use traditional outline format and numbering: I. A. 1. a.
        ii. Hierarchical/Linear: Present information in a categorized, sequential ordering
        iii. Elaborated: Include descriptions (like this sentence) that cannot easily exist in CMaps
III. ***The Knowledge/Concept Map (Structural):*** The Concept Map (CMAP) is a schematic-oriented strategy
    a. *Examples (Evidentiary):* There are many examples of CMAPs that are useful
        i. The CMAP Handout: There is a CMAP version of this outline
        ii. McCagg & Danserau (1991): These authors provide evidence of the effectiveness of CMAPs
    b. *Advantages (Critical):* CMAPs have several advantages relative to CEOs
        i. Schematic: CMAPs represent conceptual relationships using text and diagrams
        ii. Concise: CMAPs are more concise than outlines (especially CEOs)
        iii. Nonlinear: CMAPs do not require an ordered presentation

Example of an Effective Text Processing Strategy:
The Knowledge/Concept Map (CMap)

Purpose of this CMap: The Knowledge or Concept Map (CMAP) is a graphic representation of the relationships among concepts. It is a text processing strategy that includes (a) the labeling and organizing of concepts important for and related to a main idea, (b) a coding of the concepts' relationships to the main idea using pre-determined organizational scheme. The CMAP example below summarizes the main concepts and principles of text processing strategies.

Why are These Strategies Effective?

Coded Elaborative Outlines (CEOs) and Knowledge/Concept Maps (CMaps) are effective text processing strategies because they build on known principles in the psychology of learning and memory. Following the work of Tuckman (1993) and others, memory for material is best when three interrelated conditions are satisfied:

1. The material is personalized, meaning that the information is made relevant to one's own life and experiences. The text processing strategies described here encourage you "own" the material.
2. The material is actively organized by the reader. The text processing strategies described here encourage you to organize the material, rather than rely on a passive reading of the written work.
3. The material is categorized according to main concepts and especially the relationships among those concepts. This is, of course, the primary way in which the strategies described here are different from others that you may have used in the past.

Overall, each of these conditions encourages a "deeper" processing of the reading and, therefore, provides a higher likelihood of remembering the material when necessary.

References

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