Mapping (a visual system of condensing materials to show relationships and importance) is a strategy for reading which may be used by students in various courses throughout their college experience, or prior to their college experience. Mapping may also be used by individuals, small study groups, or in large groups. Mapping consists of four basic components: a core concept, major points or strands, significant subpoints or strand supports, and support ties or connectors which show the relationships between major points. As part of prereading activities, students use mapping to relate their prior knowledge about the information to be read and raise questions. During reading, students read for the purpose of confirming or modifying their prior knowledge about the major points or concepts. As a post-reading strategy, students use mapping as a means for organizing the information they recall from the passage as well as to identify areas of the passage they may not fully understand. Maps come in a variety of formats, including a basic map for brainstorming, a descriptive map, a sequential map, a "Know, Want-to-Learn, Learned" (K-W-L) worksheet, and a recall diagram. (Sample formats for each type of map discussed are attached.) (Author/RS)
Using Mapping
To Get the Most Out Of
READING!

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Abstract

Mapping is a visual system of condensing materials to show relationships and importance. According to Freedman and Reynolds (1980), there are four basic components for every map. These are: 1) a core concept, 2) major points or strands, 3) significant subpoints or strand supports, and 4) support ties or connectors which show the relationships between major points. The purpose of mapping as a reading strategy is to improve memory by grouping material in a highly visible way.

In order for students to activate their memory, mapping may be used as both a pre- and post-reading strategy (Vacca & Vacca, 1993). As a part of pre-reading, students relate their prior knowledge about the information to be read and raise questions. During the reading, students read for the purpose of confirming or modifying their prior knowledge about the major points or concepts. Finally, as a post-reading strategy, students use mapping as a means for organizing the information they recall from the passage as well as to identify areas of the passage they may not fully understand.

Mapping is a strategy for reading which may be used by students in various courses throughout their college experience, or prior to their college experience. In addition, mapping may be used by individuals, small study groups, or in large groups. While initial instruction may be helpful, students may use mapping "on-their-own" to increase their comprehension of course material.
In this booklet, you will find an exploration and discussion of the various uses of mapping as a reading strategy. The objectives of the booklet are:

1. To define mapping
2. To describe various mapping formats
3. To provide the reader with suggestions for implementation of mapping.
Mapping: A Definition

In terms of reading, the types of strategies which may be implemented as a means of increasing comprehension are as numerous as the students seeking to increase their reading skills. Of the many strategies, one which is of great interest is that of mapping. The term mapping may bring to mind different images depending on the background of the person. Terms such as semantic mapping, graphic organizers, categorization charts, or spatial outlines may come to mind.

Mapping may simply be defined as a visual system of condensing materials to show relationships and importance. According to Freedman and Reynolds (1980), there are four basic components for every map. These are: 1) a core concept, 2) major points or strands, 3) significant subpoints or strand supports, and 4) support ties or connectors which show the relationships between major points. The purpose of mapping as a reading strategy is to improve memory by grouping material in a highly visible way.

In order for students to activate their memory, mapping may be used as both a pre- and post-reading strategy (Vacca & Vacca, 1993). As part of a pre-reading strategy, after students have identified the topic, they may list everything they know about the topic. The list will be organized according to major points and placed on a map (Alverman & Phelps, 1994). This information will be validated or dismissed as students read the passage.
Students may also develop questions as a pre-reading strategy. Again, the question will be based on their prior knowledge of a particular topic and on what they feel they need to learn about the topic. This basic form may be listed on a map or in chart form. During the reading, students read for the purpose of confirming or modifying their prior knowledge about the major points of concepts.
As a post-reading strategy, students may use mapping as a means for organizing the information they recall from the passage as well as to identify areas of the passage they may not fully understand. This will allow them to re-read the passage for the purpose of “filling in gaps” of knowledge, as opposed to reading without a specific purpose.

Map for Recalling Information in Chart Form

Finally, as an instructional tool, instructors can use maps to introduce material to students through a highly visible means. By preparing a map for a particular topic on a chart or overhead to remain on display as information is presented, the instructor can provide an overview of the presentation which will assist students in following the lecture and/or reading as well as help them to develop a mind-set for the lecture and/or reading.
Various Formats for Maps

There are numerous suggestions for developing maps. Mapping is a strategy which may be used by students in various courses throughout their college experience, or prior to their college experiences. The basic difference lies within the complexity of the maps, and the amount of experience the students have with mapping strategies. Initial instruction in the area of mapping is important for student understanding and success. The goal, however, is for students to be able to use mapping "on their own" to increase comprehension of course material.

In helping students decide on maps to use, one of the first areas to explore is the intended use of the information and the type of information they will be mapping. For example, if students are using a map to "brainstorm", a basic map format may be ideal.

The general instructions for forming a basic map are as follows:

1. Write the concept or topic in the center of the page.
2. Draw four "arms" from the center term (for a basic map limit to six or eight "arms").
3. On each "arm" write a main idea about the concept or topic.
4. Under each main idea, add "branches" on which major (significant) details are listed.
Basic Map for Brain-Storming

Hamburgers

Where did they originate?

Contents:
- meat
- bread
- pickles
- mustard

What else?

Do this a matter of personal choice?

- As a matter of personal choice?
- How long has this been the case?

- Taste
- Wonderful

- Germany
- England
- U.S.

Personal choice?
How is it always been this way?
A second mapping format which may be especially useful for students is that of a descriptive map. This is useful in developing a visual "picture" of a passage in which several characteristics are being compared. This same map may be useful in literary passages which describe a number of main characters or events and significant details about the characters or events.

Descriptive Map
A third mapping technique which students may find helpful is a sequential map. This map is especially important in the area of history or in some of the sciences, as it helps to place information in sequential order. Unlike the traditional outline, the sequential map provides a visual description of the information, and if completed properly, will help students to see how all the information would fit on a time-line in history. In thinking about the area of science, especially in terms of experiments, the student can be aided through the use of a sequential map on the steps or procedures which must be followed for successful completion. In addition, the science student may use the map to track the procedures used during an experiment and be able to retrace to see why (or why not) the experiment was (or was not) successful.

Sequential Map

```
Eggs placed in incubator

eggs turned day 1

heat & moisture day 2
heat & moisture level checked

Day 3
```
While there are many types of mapping activities which may be used, it is important that we encourage modification to meet the individual needs of students'. Modification may mean making the maps larger, so that more information may be included, or keeping them very simple for more general types of information. In any situation, the beginning purpose of using mapping is to help students use their prior knowledge as well as focus on a topic.

While not exactly mapping, another strategy for helping students think or "brainstorm" about a topic is the KWL (Known, Want to learn, Learned). This strategy was developed by Ogle (1986) as a means of helping students with organization of thoughts, individually or as a group. In this strategy, students first brainstorm and list everything they know about a particular topic. In the second step, students develop questions concerning the topic which they would like to learn more about. A third stage of the strategy is where students list what they have learned about a topic after they have completed their research. This strategy is especially useful as it encourages organization of thought. Again, as with mapping, the KWL Strategy may be modified on the students' needs as well as the topic for more or less detail.
K-W-L Worksheet Format

<table>
<thead>
<tr>
<th>K (Known)</th>
<th>W (Want to Learn)</th>
<th>L (Learned)</th>
</tr>
</thead>
</table>

K-W-L: Example Know and Want to Know

*Topic: Depression*

<table>
<thead>
<tr>
<th>K</th>
<th>W</th>
<th>L</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Blue</em></td>
<td><em>Is depression hereditary?</em></td>
<td></td>
</tr>
<tr>
<td><em>Trouble sleeping</em></td>
<td><em>Is there a &quot;cure&quot;?</em></td>
<td></td>
</tr>
<tr>
<td><em>Anxiety</em></td>
<td><em>Can anyone become depressed?</em></td>
<td></td>
</tr>
<tr>
<td><em>May have trouble talking about problem</em></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Finally, another strategy which students may find helpful is a recall diagram (Smith, 1993). This is a brief visual diagram which helps students recall material they have just read and to relate that material to information which has been previously learned.

Recall Diagram

![Recall Diagram](image)

By following this procedure throughout the reading, and making a diagram for each section or subsection, the student should be able to remember major points. It serves as a self-check as the student reads the material so that information is learned correctly. In addition, it will help a student develop accurate notes on assigned reading material and therefore make reviewing for exams easier.
Conclusion

The purpose of this booklet is to define mapping and to provide examples of how the strategy may be implemented to empower students with a means of "getting-the-most" from materials being read. The information provides an introduction to the area of mapping as a strategy which, when combined with other strategies will help to increase memory and comprehension of students.

Given this information, instructors are encouraged to use this booklet as a foundation for exploring various strategies from which students may benefit as they seek to increase their reading skills.
References


APPENDIX:

Format sheets for strategies discussed in this booklet.
<table>
<thead>
<tr>
<th>K  (Know)</th>
<th>W  (Want to Know)</th>
<th>L  (Learned)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Recall Diagram

(topic)

(significant details, facts, or terms)

(related idea)