

Exploring for Learning



Reflection on Practice Using Graphic Organizers



Welcome to the workbook for reflecting and note taking on using graphic organizers in higher education. You will notice that it follows along with the module to help you capture personal thoughts and new knowledge. It can be printed and used throughout to track best practices.

Graphic Organizers can guide the flow of ideas so that students can more easily follow the information being provided, to show relationships between multiple concepts, and to act as a review of information presented in previous classes.

Ask yourself the following questions and record your thoughts in the space provided.

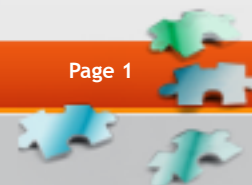
Graphic organizers are visual representations of knowledge, concepts or ideas.



They are used to:

- List
- Organize
- Analyze
- Synthesize or
- Evaluate
- ... ideas or information.

Questions	Thoughts
How do you currently communicate the key concepts of a course/lecture to your students?	
Have you ever created a course/lecture using a graphic organizer to explain key concepts? Which type? How was it effective? How did you know it was effective?	



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Explore your own teaching

In which of your courses do you think you could incorporate graphic organizers?

Complete the chart below for your own reference and to record your thoughts. Begin with selecting a course followed by a major concept of the course. Think of the benefits of visually depicting the concept and then select a graphic organizer to suit those benefits.

Course	Concept	Benefit	Type of Graphic Organizer

Most Complex



Concept Maps: Show hierarchical relationships between concepts

Mind Maps: Organize information from most to least complex

Fish Bone Diagrams: Show cause and effect relationships

Venn Diagrams: Compare and contrast ideas

Ranking Ladder: Prioritize based on criteria

Flow Charts: Sequence of ideas/actions

Word Webs: Basic organization of ideas

Least Complex

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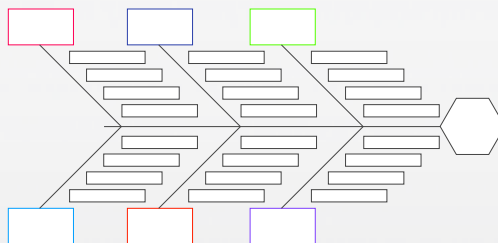
Making Connections to Teaching Using a Fish Bone Diagram

A fish bone diagram (sometimes called a map, herringbone map, chart or cause-and-effect diagram) is a type of graphic organizer that is used to explore the many aspects or effects of a complex topic, helping the student to organize their thoughts in a simple, visual way.

The process of creating a fish bone diagram helps the student focus on the topic, requires the student to review what they already know in order to organize that knowledge, and helps the student to monitor their growing comprehension of the topic. It also helps point out the areas where the student must investigate more (where the fishbone is difficult to fill out).

A fish bone diagram can be used to prepare for a writing assignment; the student must concentrate on the main topic, list the big ideas concerning the topic, and think of the attributes/qualities/functions/effects associated with each of these ideas.

On the next page, create a Fish Bone Diagram from one of your topics you recorded from the previous page's exercise or select a new topic related to course work. Completely fill out the fish shape.



Tip:



While drawing the fishbone chart, care is taken to have the inner branches meet a horizontal straight line, called the "spine" of the chart.

The **statement of the problem - or the effect** - is to the right of the spine inside a box, which makes it look like the head of a fish.

The **body** of the fish will have the words.

Each fish **rib** will have **main** topics on the angled lines, and **details** on the horizontal lines

When finished, the entire map resembles a fishbone.

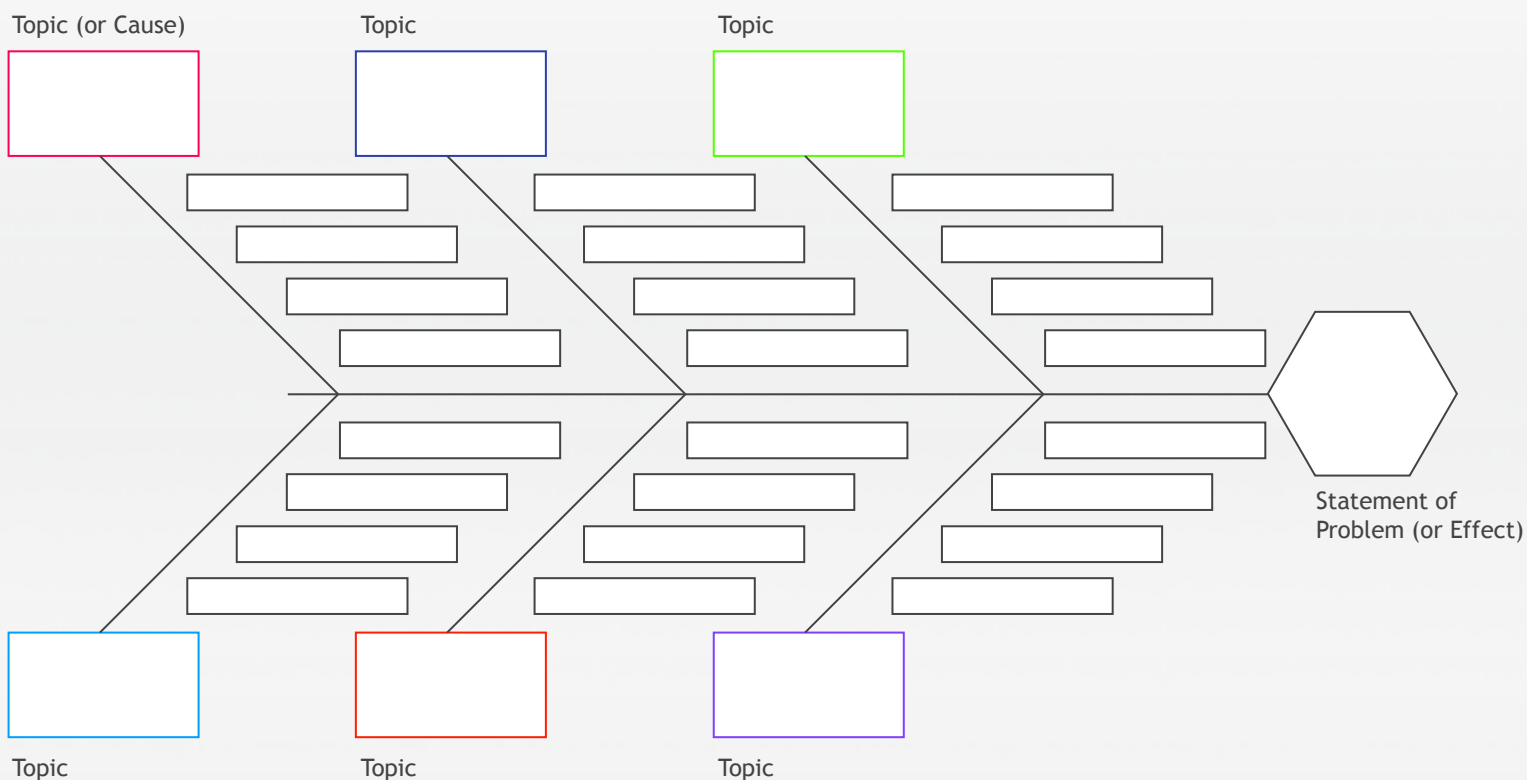
The use of **color** helps make a fishbone map clearer and easier to interpret.

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Fish Bone Diagram

Course topic: _____



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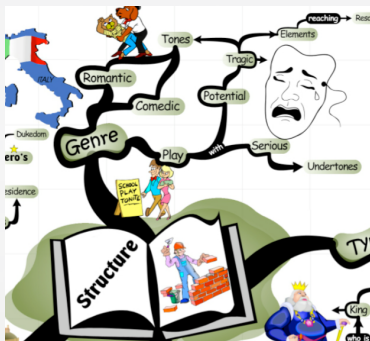


Making Connections to Teaching Using Mind Maps

In higher education, your goal as instructor is to achieve greater in-depth understanding among your students.

In order to achieve deep understanding, it requires you to go beyond surface understanding (recall and recognition) and to critically explore in-depth complex, abstract, and sometime counterintuitive ideas by involving students in active questioning, comparing and contrasting, practical applications, and rethinking what they thought they knew.

Graphic organizers can help you achieve this goal. For example, students use mind mapping to organize their information in such a way that they remember that information for writing a test or an essay. The application of colour and images increases the chance that students retain information.



On the next page, create a mind map on a topic related to course work using all the required elements of a mind map. You can choose to create a mind map to use as part of your instruction or you can create a mind map of a topic that you may ask your students to create as an in-class activity or take home assignment.

Elements of a Mind Map



1. **Hierarchy:** A mind map usually begins with a general topic in the middle, radiating out to more specific topics as you move out from the central topic.
2. **Images or symbols:** Images are extremely important to the development of ideas. Images enable the brain to make more connections and associations with other concepts.
3. **Lines and Arrows:** Lines and arrows in a map assist the learner in communicating how the concepts fit together. Lines and arrows can be any thickness or style. Usually thicker lines and arrows indicate more important relationships than thinner ones.
4. **Colour:** Just as regular maps use colours to represent different features more readily, colour in mind maps can assist the reader to see groupings and themes.

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Mind Map

Course topic: _____

Central topic:

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Making Connections to Teaching Using Concept Maps

A concept map consists of concepts that can be provided by the instructor, the student or both.

They enable students to map out their understanding of the relationship of concepts in order to improve their thinking and meta-cognitive abilities. They require students to think inductively and operate at the analysis level of thinking through classifying and organizing information hierarchically. They are linked to each other by lines and propositions joining the concepts to show the nature of the relationship.

On the next page, use the list of connector words below and your new knowledge about concept mapping to create your own concept map on a topic related to some aspect of course work.

adds
are
begins with
can be
cannot be
depends on
does not use
due to

enhances
equals
improves
involves
is connected to/is not
is measured in
is part of
must have

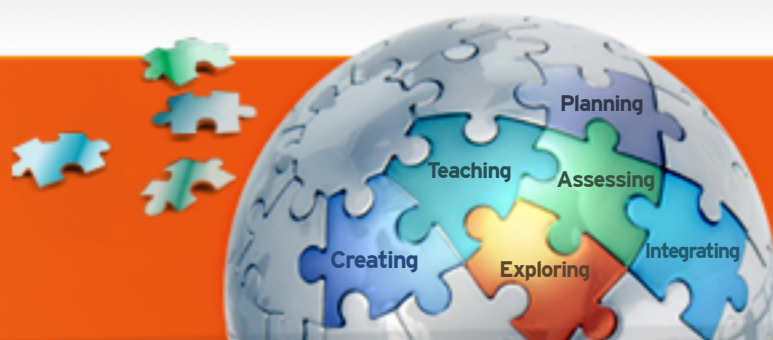
needs
refers to
related to
represents
such as
similar to
to
uses

Elements of a Concept Map



1. **Concept:** General overriding concepts flow down to more specific concepts and further still to very specific concepts.
2. **Connector Words:** On each connector line there is a connector word(s) which communicates how the learner understands the relationships between the two concepts. Each line is labeled with words such as “can be” or “is related to”. The connector or linking words explain how the concepts are related. The connection between two concepts is called a proposition.
3. **Connector Lines** relate concepts in the map by visually connecting them together. Use these lines, with or without arrows, to link each concept in the map to one or more other concepts.
4. **Hierarchy:** The concept map represents how the student organizes the concepts hierarchically in the map. Concept maps typically begin at the top with more general concepts and progress downwards to more specific concepts.

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Concept Map

Course topic: _____

General topic:

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Getting Students to Create Graphic Organizers as a Learning Activity or Assignment



Think about ways in which graphic organizers could be integrated into your current and future course work. Using the chart below:

1. Take one course; make a list of the topics that would lend themselves to students creating graphic organizers.
2. For each topic, identify purpose of the graphic organizer.
3. Identify what criteria would be used to assess the effectiveness of each selection?

Remember graphic organizers can be used to:

- Summarize an article or film
- Present information in a PowerPoint
- Identify existing errors in a concept map - correct it, revisit it and build on it
- Present different perspectives to a debate
- Explore personal knowledge
- Promote discussion
- Form part of an assignment

Course: _____	Purpose	Type of Graphic Organizer (Mind or Concept Map, Fish Bone or Venn Diagram, Ranking Ladder, Flow Chart or Word Web)	Learning Activity or Assignment	Assessment Criteria
Topics:				



A globe is depicted as a sphere composed of interlocking puzzle pieces. Several pieces are highlighted with labels: 'Planning' (purple), 'Teaching' (teal), 'Assessing' (green), 'Integrating' (blue), 'Exploring' (orange), and 'Creating' (blue). The globe is set against a background of orange and red horizontal stripes. To the left of the globe, several loose puzzle pieces are scattered on the orange background.

Graphic organizers promote deep understanding. Students achieving deep understanding are better able to:

- Demonstrate knowledge of key concepts and ideas related to the subject
- Ask central questions related to the subject
- Conduct independent inquiries or investigations
- Analyze assumptions and discover relationships
- Compare and make distinctions between concepts
- Refine, extend or refute existing hypotheses or theories
- Solve problems and produce new knowledge.