## Want to Facilitate a Concept Map in *Your* Class?

Concept maps are graphic organizers that display relationships among concepts. In drawing a concept map, students actively construct their understanding of a topic.

## Why should *you* facilitate a Case Study?

Possible learning goals: Have students make connections within course material. Help visual learners organize concepts. Depict hierarchical or chronological information.

## How to Facilitate a Concept Map:

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| **Prep** | • Gather materials<br>• If using the Expert Skeleton Map variation, prepare a starting map |
| **During** | • Tell students how to make a Hierarchical Concept Map<br>• Tell students how to make a Mind Map |
| **After** | • Evaluate the Concept Maps |

### Prep

Gather Materials

- You will need paper, pens, and markers. Alternately you can have students draw on a chalk board with colored chalk or a white board with colored markers

If using the Expert Skeleton Map variation, prepare a starting map

- Expert Skeleton Maps are a concept map variation in which students are given partially completed maps from an expert in the field
- Prepare the starting "Expert Map" and decide on a list of remaining concepts that students will add to the map

### During

Tell students how to make a Hierarchical Concept Map

- Identify the main topic or concept and place it at the top center of the map. This is the *superordinate concept*. It is the most inclusive, general, abstract or is the first stage of a process or sequence.
- Identify key concepts (about ten to twenty) from the reading, lecture, or other sources. These are called *subordinate concepts*.
- Write each concept on a small index card or sticky note
- Rank, order, or cluster all remaining *subordinate concepts*. Place the more inclusive, general, broad or abstract concepts higher up and closer to the main concept. Place most exclusive, specific, narrow, or concrete concepts lower on the map. In the case of a process or sequence, order the concepts chronologically. The object is to structure the concepts and their interrelations correctly.
- Arrange the concepts in a linkable hierarchy
- Draw the entire hierarchy on apiece of paper/board with enclosures around the concepts and linking lines that are labeled to the specific relationship. The linked concepts together with the labeled link are called the *proposition*

- Check for any cross-links (connections across branches), draw in these links as dashed lines and label them

Tell students how to make a Mind Map

- Identify the central concept, topic, or idea. Write it in the center of a large piece of paper or on the board. This is the *primary idea*
- Identify up to six closely related concepts, topics, or ideas, such as subordinate concepts, subtopics, properties, or descriptors. These are the *secondary ideas.* Write each of these secondary ideas at the end of a thick line radiating from the central *primary idea*.
- For each *secondary idea*, identify up to six closely related concepts, topics, or ideas, such as subordinate concepts, subtopics, properties, or descriptors. These are the *tertiary ideas.* Write each of these tertiary ideas at the end of a thick line radiating from the *secondary idea*.
- Look for cross-relationships between secondary or tertiary ideas. Drawn thin or dashed lines connecting related ideas
- Add color, icons, and other appropriate symbols. Color-code each line and key words by secondary branch

Be concise

- Use the briefest and sharpest expression of each idea
- Clearly label each arrow

**After**

Evaluate the Concept Maps

- Concepts Maps can be used as a *formative assessment* as they reveal what students already know about a topic and make plain whatever misconceptions they have. Reviewing what they already know primes students to better understand new information.
- Concept maps can also be used as *summative assessment*. Constructing a concept map is associated with higher retention when it is done at the end of a unit as opposed to the beginning

Provide student feedback

- Inform students (either individually or the group) how they did during the case study. What worked? What didn't work? Did everyone participate equally?
- Taking time to reflect on the process is just as important to emphasize and help students learn the importance of teamwork and communication.
- Potential Evaluation Criteria: Number of concepts included (unless they are provided), number of valid links between concepts (*propositions*), number of valid levels of hierarchy, number of valid cross-links, number of valid examples

Adapted From: Nilson, L. B. (2010). *Teaching at its best: A research-based resource for college instructors*. San Francisco, CA: Jossey-Bass.