

## **Lecture notes: How to construct a concept map**

### **1. Learning examples: discussion**

- Think of an experience in class where you were left thinking:
  - "I really know this stuff."
  - "That really clicked."
- What did you or the instructor do to help you understand the concept well?
- Did this understanding happen right away? How did it come about?
  - *Many students discussed an experience that helped them "see the big picture" or link a new concept to something they had learned before. This was a good segue into concept mapping.*

### **2. Concept map background (1)**

- A concept map is a tool to help illuminate the big picture, illustrate how ideas fit together, and tie new ideas to previous experiences and current knowledge.
- First, we need a focus question. Then, concepts are created and linked to form propositions.
- A concept map is hierarchical. All pieces of information are connected together with links as well as cross-links (see examples below).

### **3. General steps for creating a concept map**

- Build a concept map as a class (class activity): ask students to come up with a list of items that explores the focus question, "What do college professors do?" Write each entry on a piece of 3" x 5" post-it note and place it on the whiteboard. Students should be able to come up with 15 to 20 items.
- Map it on the whiteboard by moving the post-it notes and adding linkages with a whiteboard marker. It isn't necessary to use all the concepts generated earlier (see examples below).
- Group exercise (groups of ~4):
  - Ask the class to come up with a list that explores the focus question, "What are the characteristics of superheroes?"
    - *We chose a topic that was easy for the students so they could focus on the mechanics of creating a concept map.*
  - Ask each group to create a concept map using the information listed on the whiteboard from the class discussion. Take 10 to 15 minutes.
  - Show and tell (see examples below).

### **Reference.**

1. **Novak, J. D., and A. J. Cañas.** 2008. The theory underlying concept maps and how to construct and use them. Florida Institute for Human and Machine Cognition, Pensacola, FL.

<http://cmap.ihmc.us/Publications/ResearchPapers/TheoryCmaps/TheoryUnderlyingConceptMaps.htm>