Concept Mapping For Librarians

Collaborating
- Creation
- Organization
- Communication

Designing
- Content
- Concepts
- Relationships

Teaching
- Active learning
- Demonstration
- Evaluation

Examples
April Colosimo & Megan Fitzgibbons, November 2010
Concept Maps

Joseph Novak

Associated Feelings or Affect

Concepts

Linked Words

Propositions

Organized Knowledge

Focus Question(s)

Context Dependent

Effective Teaching

Effective Learning

Crosslinks

Units of Meaning

Hierarchically Structured

Labeled

Symbols

Words

Perceived Regularities or Patterns

Creativity

Experts

Cognitive Structure

Interrelationships

Different Map Segments

Events (Happenings)

Objects (Things)

Infants

Begin with

Begin with

Needed to See

Needed to answer

Are

May be

Necessary for

Effective for

Social

Personal

e.g.

In

In

Show

Built with

Built with

Aids

Especially with

Construct

Construct

Begin with

Begin with

Help to answer

Help to answer

Represent

Represent

Developed by

Developed by

From

http://cmap.ihmc.us/conceptmap.html
Concept 1

Relationship

Concept 2

Proposition
Mind map (Buzan)
Spidergram

Info Literacy Maps

collaboration
- would be helpful for multiple people to edit one map
- would be nice to publish online
- +collaboration might get stuck in a service
- import/export files? what formats?
   - other programs other ways to publish

online service
  - concept maps only
    - collaboration: public servers
      - link and organize files
      - well-developed methodology
      - drilldown
      - (loosely) tied to service
      - share feature limited
      - html limited
      - export freemind files?
    - own format zipped xml
      - attractive styles
      - really common format
        - could be used with other tools: xml
    - freemind implements
descent flash viewer
can put on an existing website
can link to other maps

xmind
  - export to other formats?
  - html limited
  - export freemind files?
  - own format zipped xml

mind maps or concept maps

parallel maps
- course info literacy
  - maps are linked communication between professor and librarian

post processor
- could convert formats
  - join maps
  - separate maps
  - link maps

possible implementation

would be helpful for multiple people to edit one map
would be nice to publish online
Many other types of maps

A PERIODIC TABLE OF VISUALIZATION METHODS

<table>
<thead>
<tr>
<th>Category</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Visualization</td>
<td>Visual representations of quantitative data in schematic form (either with or without axes)</td>
</tr>
<tr>
<td>Strategy Visualization</td>
<td>The systematic use of complementary visual representations in the analysis, development, formulation, communication, and implementation of strategies in organizations.</td>
</tr>
<tr>
<td>Information Visualization</td>
<td>The use of intangible visual representations of data to simplify cognition. This means that the data is transformed into an image that is realized in screen space. The image can be changed by users as they proceed working with it.</td>
</tr>
<tr>
<td>Metaphor Visualization</td>
<td>Visual metaphors facilitate information graphics to organize and structure information. They also convey an insight about the represented information through the key characteristics of the metaphor that is employed.</td>
</tr>
<tr>
<td>Concept Visualization</td>
<td>Methods to elaborate (mostly) qualitative concepts, ideas, plans, and analogies.</td>
</tr>
<tr>
<td>Compound Visualization</td>
<td>The complementary use of different graphic representations formats in one single scheme or frame.</td>
</tr>
</tbody>
</table>

Note: Depending on your location and connection speed it can take some time to load a pop-up picture. © Ralph Langner & Martin J. Eppler, www.visual-literacy.org

version 1.5
Concept Map Version 1

- Social Impact of Viruses
- Epidemic Pandemic
- Vaccines
- Emerging Viral Pathogens
- Global Perspective
- Prevention
- Treatment
- Life Skills/Educational Skills
- Literacy
- Biology
- Evolution
- Virus Replication
- Viral Origin
- Human Viruses
- Plant Viruses
- Animal Viruses
- Activity: Read article on virology and discuss mass media role of new knowledge
- Critical Thinking
- Infection
- Virus Propagation/Adaptation
- Lifecycle/Phenotypes
- Lab Skills
- PCR Genetic/Cloning
- Problem Solving
- Oral Communication Skills
Concept Map Version 4

World of Viruses

History
- Historical Perspective
- Impact on the development of Society

Biology
- Virus Structure
- Virus Replication
- Viral Genomes

Health
- Social Relevance
- Prevention and Control
- Benefits to Health

Research
- Benefits to Science
- Advances in Molecular Biology
- Advances in Experimental Medicine

Biology
- Virus Structure
- Virus Replication
- Viral Genomes

Health
- Social Relevance
- Prevention and Control
- Benefits to Health

Research
- Benefits to Science
- Advances in Molecular Biology
- Advances in Experimental Medicine
Evolution of the pathogen *Mycobacterium avium* subsp. *paratuberculosis*
Evolution of the pathogen *Mycobacterium avium* subsp. *paratuberculosis*
Impact of advertising on teen smoking

- Marketing campaigns
  - Surgeon general
- Counter campaigns
- Psychological factors
- School programs
- Peer pressure
- Rebellion
- Statistics on teen smoking
  - Canada
  - United States
# How to Create a Concept Map

1. Identify the general/broad topic that you are interested in.
   
   Example: You are interested in the general topic of obesity

2. Brainstorm on the general topic and list all the concepts and themes that are related to the topic on a large piece of paper; concepts as concise as possible.
   
   Example:

<table>
<thead>
<tr>
<th>Who?</th>
<th>Kids</th>
<th>Obese parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>How many?</td>
<td>Adult female</td>
<td>Unhealthy Diet</td>
</tr>
<tr>
<td>Reasons or causes of</td>
<td>Mothers</td>
<td>Little physical exercise</td>
</tr>
<tr>
<td>Effects of</td>
<td>Depression</td>
<td>Soda pop</td>
</tr>
<tr>
<td>More fast food</td>
<td>Genetic</td>
<td>Dessert</td>
</tr>
<tr>
<td>Bigger portions</td>
<td>More TV viewing</td>
<td>Too much sugar</td>
</tr>
<tr>
<td>Large fries</td>
<td>Sedentary life style</td>
<td></td>
</tr>
<tr>
<td>Diabetes</td>
<td>Low work productivity</td>
<td></td>
</tr>
<tr>
<td>Technology dependent</td>
<td>Low self-esteem</td>
<td></td>
</tr>
<tr>
<td>Stroke</td>
<td>Poor emotional</td>
<td></td>
</tr>
<tr>
<td>Heart disease</td>
<td>Physical fitness</td>
<td></td>
</tr>
<tr>
<td>High-blood pressure</td>
<td>Balanced diet</td>
<td></td>
</tr>
<tr>
<td>Balanced diet</td>
<td>Nutritious meals</td>
<td></td>
</tr>
<tr>
<td>Little sugar</td>
<td>Less fast food</td>
<td></td>
</tr>
</tbody>
</table>

3. Using unlined paper, write the main theme in the center of the page.

4. Take the other concepts identified in the brainstorming and connect them to the center concept. You can use different media such as branches, arrows or groups. More important ideas should be put nearer to the center and less important ones more distant.
Active learning

To create a map, you can use concepts identified in the brainstorming and connect them to the center concept. You can use other organizational patterns, arrows or groups. More important ideas should be put nearer to the center and less important ones farther away. This helps visualize the relationship between the concepts.

After the map has been created, look at the organizational patterns to see if the pieces fit together and make sense and if there is anything missing. After the map has been created, look at the organizational patterns to see if the pieces fit together and make sense and if there is anything missing.
Concept map of information sources

What is the relationship between political participation and religious affiliation?

Evidence to support argument

- Previous research studies
  - in the form of
    - Books
      - found in Catalogue
    - Scholarly articles
      - found in Bibliographies
      - found in Databases

- Public opinion polls
  - online data
    - Gallup polls
    - ESS

- News articles
  - found in Databases
  - found in Websites

Evaluation
**Students in this course**

- Are expected to
- Are evaluated on

**Research paper**

- Requires students to
  - Select a topic
  - Identify sources of evidence

**Brainstorming worksheets**

- Resources web page
- In-class workshop

**Sources of background information**

**Types of materials available**

**Planning & Communicating**

**POLI311**

**Latin American Politics**

- Past exams in the library catalogue
- Mid-term exams

**Synthesize information and write paper**

**Locate appropriate literature**

- Finding known items from citations
- Finding academic books and articles

**Evaluating information**

**Instructional videos**

**In-class presentation**

**Consultation with librarian**

**Worksheets**
Planning

Serials weeding project

Is it a serial?
- If yes
  - Is it active?
    - If yes
      - No further action
    - If no
      - Consult Richard Virr
- If no
  - Delete from spreadsheet

Is it active?
- If yes
  - Is it pre-1850?
    - If yes
      - Is it in JSTOR?
        - If yes
          - Assign subject
            - Subject librarian decides
              - Move
              - Keep 3rd flr
        - If no
          - Enter provider's name and coverage
            - Then
              - Assign subject
                - Subject librarian decides
                  - Move
                  - Keep 3rd flr
                  - Withdraw
    - If no
      - Is it in JSTOR?
        - If yes
          - Assign subject
            - Subject librarian decides
              - Move
              - Keep 3rd flr
        - If no
          - Enter provider's name and coverage

First priority

Is it a CREPUQ obligation?
- If yes
  - Assign subject
- If no
  - Subject librarian decides
    - Move
    - Keep 3rd flr

Note! When the Redpath basement is full, the "move" option disappears.
Itinerary for Research, Teacher Planning

Pieter Carper
Atlas TI analysis software

- Tool interface
- Code Manager
- Name: A bit outdated (3-1)
- Interface does not guarantee functions (1-1)~ Connected to usability
- Command line (rather than GUI) (5-6)~ Connected to usability
- GUI-base interface (3-2)~ Either +tive or -tive (need to click to proceed)
- Time saving (1-1)~ Connected to usability
- Designed for general audiences (2-1)~ Connected to usability
- Not good interface (1-1)
- Command line (rather than GUI) (5-6)~ Connected to usability
- Specific programming language (2-1)
- Customisability (5-6)
- A bit outdated (3-1)
Shielding from Radiation, Teacher
First Concept Map, Students

- Parking Lot
  - Fly
  - Feathers
  - Hollow Bones
  - Eggs
  - Two Wings
  - Beaks
  - Insulation
  - Light body Weights

- What are birds?
  - Birds
  - Food
  - Rapid Digestive Systems
  - Warm-Blooded Animals
  - Constant Body Temperature

- 14 concepts
  - range from
  - General
    - Specific
      - to
Assignment, Student

begrissen

- Visueel schema
- Concept map
- Mindmap
- Tony Buzan
- Joseph Novak
- Web
- Top-Down
- Links-Rechts

werkwoorden op pijl

- bedacht door
- is
- heeft als vorm

[meer]
Context
What is the subject matter?

Content

Learning
What will students learn?

Outcome

Assessment
Are students learning?

Strategy
What activities will support learning?
Prezi: No self-respecting physicist...
Information Retrieval

Results 1 - 25 of 120,890 for communism, sorted by: relevance

Your query has been expanded with: Communism and Judaism (subject), Communism and Zionism (subject), Marxism (subject), Bolshevism (subject)

   Epstein, Melech
   New York, Trade Union Sponsoring Committee [1959]
   Found: and (4) Communism (3) Jewish (2) communists (1)
   Rosenberger Library of Judaica

   Epstein, Melech
   New York, Trade Union Sponsoring Committee [1959]
   Found: and (4) Communism (3) Jewish (1) Zionism (1)
   Regenstein, Bookstacks DS143.E64

3. The myth of Jewish communism: a historical interpretation / André Gerrits.
   Gerrits, André.
   Brussels ; New York : P.I.E. Peter Lang, c2009.
   Gods, humans, and religions ; no. 16
   Found: Communism (2) Jewish (2) and (1) communists (1)
Mobile mapping
Mobile mapping

Thinking Space

Developer: C Chilton

Portable Mind Mapping has never been so much fun! Create visual mind maps that help organize and plan your activities and ideas. * Awesome mind mapping tools (links, notes, colors, icons) * Great for study, meetings, tasks, planning, go well! study, organize, revision, learn, brainstorming, studying, more study.
Inspiration?

@InspirationSW Inspiration 8 or 9 or Android phones?

SarahAtInspSW @VisualMap That's a great question! At this time we do not have phone apps.

about 20 hours ago via web

about 19 hours ago via TweetDeck in reply to VisualMap
Image credits

- Slide 14, 15: Utah State University Libraries Reference Services Department
  http://library.usu.edu/instruct/tutorials/cm/CMinstruction2.htm
- Slide 16: Open Access concept map by Laura Briggs -
  http://www.ualberta.ca/~lbriggs1/briggs/openaccess.html
- Slide 27: McGill Teaching and Learning Services