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DESCRIPTION OF A PARTY

-Self-Organization +Emergence

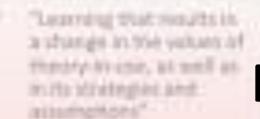
"Loareng as a sonn-ection/intemreforming process?"

## Concept Mapping: Making Learning Meaningful

#### Based on a presentation by Ginny Cathcart of VCC

### **Meaningful learning**

- What was something you learned in a course that was *personally meaningful* to you?
- How did you learn it? Through lecture, a project or research paper, class discussion, class activities?
- Why was it meaningful?



## **Rote Learning**

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"Loadering as a some etter d'attampte forming provinsi"

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- What do we mean by this term?
- What is an example of rote learning?
- notiect, will-emission, detect/corroct priorit, require, text

DESCRIPTION OF A PARTY.

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#### Arbitrary

verbatim

realized a PVD

### Definition

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"Country as a connection/tetraneter forming process?"

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non-substantive incorporation of new knowledge into cognitive structure.

## **Definition of meaningful learning**

#### **Rote learning**

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#### **Meaningful learning**

COMPRESSION

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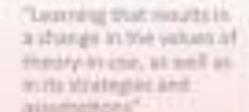
- Arbitrary
- Verbatim
- Non-substantive

## Social constructivist view of learning

 learning is an interactive and collaborative experience

individual cognition occurs within a social context

collaboration between individuals in a social learning environment facilitates learning



## Vygotsky

"Loanning as a sonn-ection/lastameter forming process?"

 Through interaction and collaboration with capable peers or under adult guidance, children "grow into the intellectual life of those around them" and their potential developmental level becomes their actual developmental level

### **Negotiation of meaning**

From collaboration to individual reflection

- Sharing and comparing information
- negotiating meaning by applying newly constructed knowledge and reflecting on what you have learned

#### Learning and cognition

 Ausubel: a primary process in learning is subsumption in which new material is related to relevant ideas in the existing cognitive structures.

## Schema Theory

"Learning as a somection/castameter forming province"

 "Existing cognitive structures" = schemata

- Schemata = organized framework of knowledge or schema
- A blueprint constructed through life experience, prior learning (both formal and informal)

#### "Learning that mouth in a shange in the values of theory in one, at well as in its strategies and strategies and

## Schema theory

"Country as a connection/instample forming process?"

- Schemata is our prior knowledge...
- 1) a framework that allows us to infer, anticipate, and predict
- 2) a way to organize text to retain and remember information, and
- 3) a way to elaborate information.

#### **Novak's Concept Mapping Technique**

 "Meaningful learning involves the assimilation of new concepts and propositions into existing cognitive structures"

personal treat measures in

### **Concept Mapping**

- Novak and Gowan's (1984)theory of instruction
- based on Ausubel's meaningful learning principles
- "concept maps" are used to represent meaningful relationships between concepts and propositions.

#### **Concept Mapping**

Learning that results in

 Concept map: a "kind of visual road map showing some of the pathways we may take to connect meanings of concepts."

### **Concept Mapping**

- Concept mapping is a technique for representing knowledge in graphic form.
- Networks consist of nodes and links.
- Nodes represent concepts and links represent the relations between concepts.

#### Concept maps are used to...

- to generate ideas (brain storming, etc.)
- to design a complex structure (long texts, hypermedia, large web sites, etc.)
- to communicate complex ideas
- to aid learning by explicitly integrating new and old knowledge
- to assess understanding or diagnose misunderstanding

#### Students can use concept maps to..

#### learn course material

- take class notes.
- organize class notes or course material.
   integrate course content
  - connect material learned throughout the semester.

integrate material across different courses

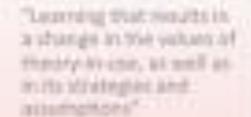
#### Instructors can use concept maps to...

 assess changes and growth in the students' conceptual understanding throughout the course

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Learning that results in

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"Loadering as a sonn-ection/lastameteforming process?"

make connections.

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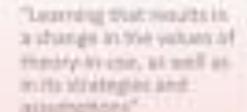
## 1. Identify important terms or concepts to include on map

notiect, well-enticize, detect//corroct.organ, (require, text)

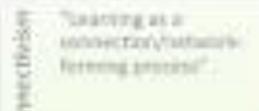
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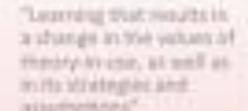
-Self-Organization -Emergence



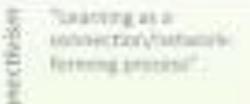
## 2. Arrange concepts in a pattern that best represents the information

## can be a flowchart, web, or any structure



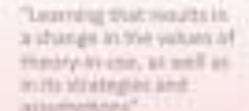


-Self-Organization +Emergence



3. Use circles or ovals to enclose an important term or concept within it
Each circle or oval should enclose only one term or concept.

–However, terms can be more than one word.



-Self-Organization +Emergence



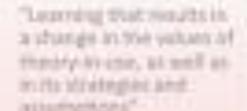
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# 4. Use straight lines with arrows (single or double-headed) to link terms that are related

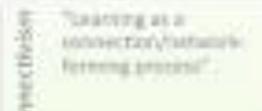
#### related

detect/correct arrow.

- Each line should link only two concepts.
- However, there is no limit to the number of links stemming from any one term.



-Self-Organization +Emergence



#### 5. Use a word or phrase of words as labels along the lines to designate the relationship between two connected terms



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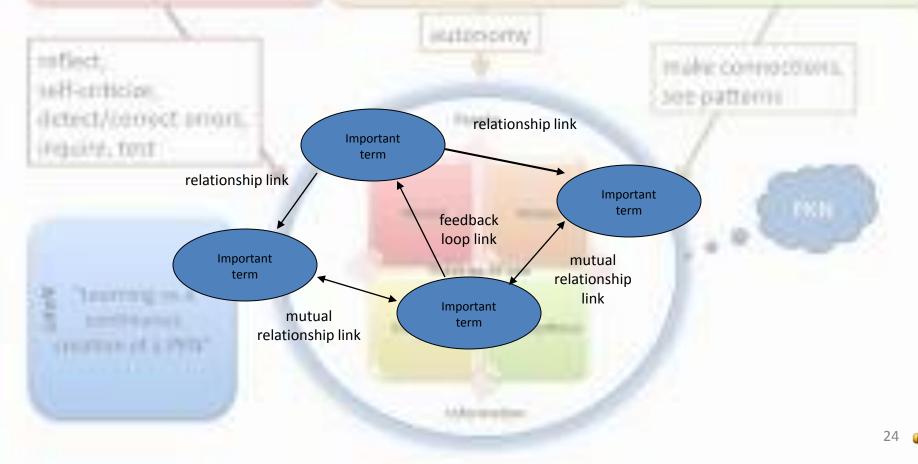
- Self-Organization + Emergence



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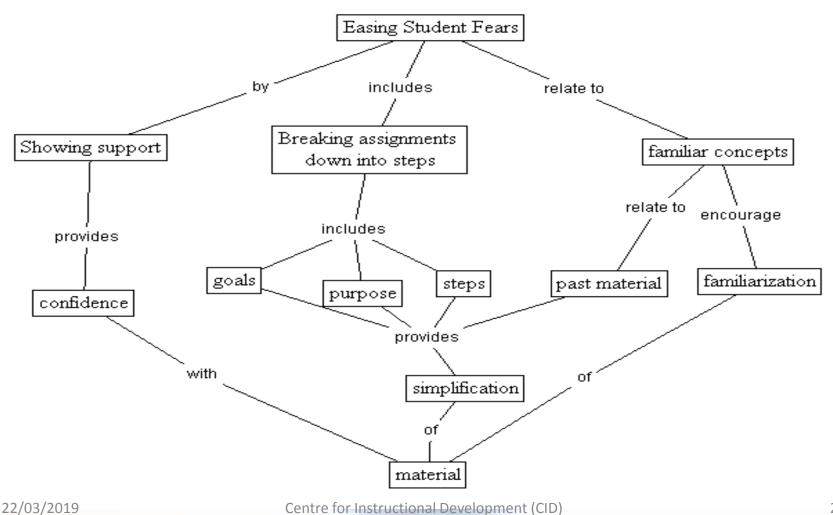
Each line should have a label that describes the relationship between the two terms it connects. Example:



#### **Example of Concept Map**

Learning that results in

1



21.2

BROUTH,