

Creating Mind Maps Using VUE

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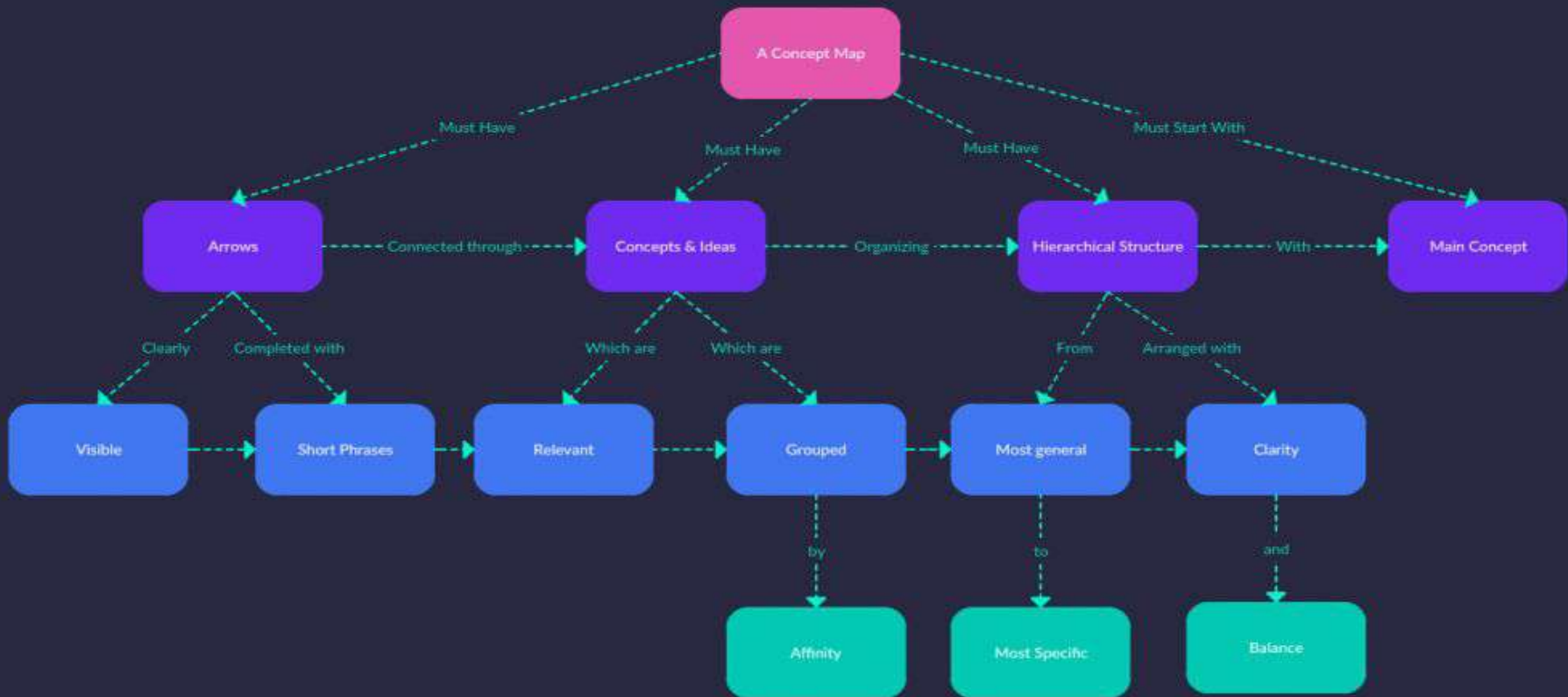
Graphical Tool

A graphic tool is a software application or platform that makes use of visual effects to improve any content.

The right graphic tools can help a talented designer bring their design vision to reality and eventually create attractive visuals by manipulating images or models visually on a computer.

What is a Concept Map?

Concept maps are a graphical tool that is used to visualize meaningful relationships among concepts. It's used as a knowledge representation tool, meaning they basically represent the knowledge structure that we humans store in our minds about a certain topic. Both simple and complex concept maps consist of two things: concepts and relationships among them.



Mind Map

A mind map is a diagram used to visually organize information into a hierarchy, showing relationships among pieces of the whole. It is often created around a single concept, drawn as an image in the center of a blank page, to which associated representations of ideas such as images, words and parts of words are added.

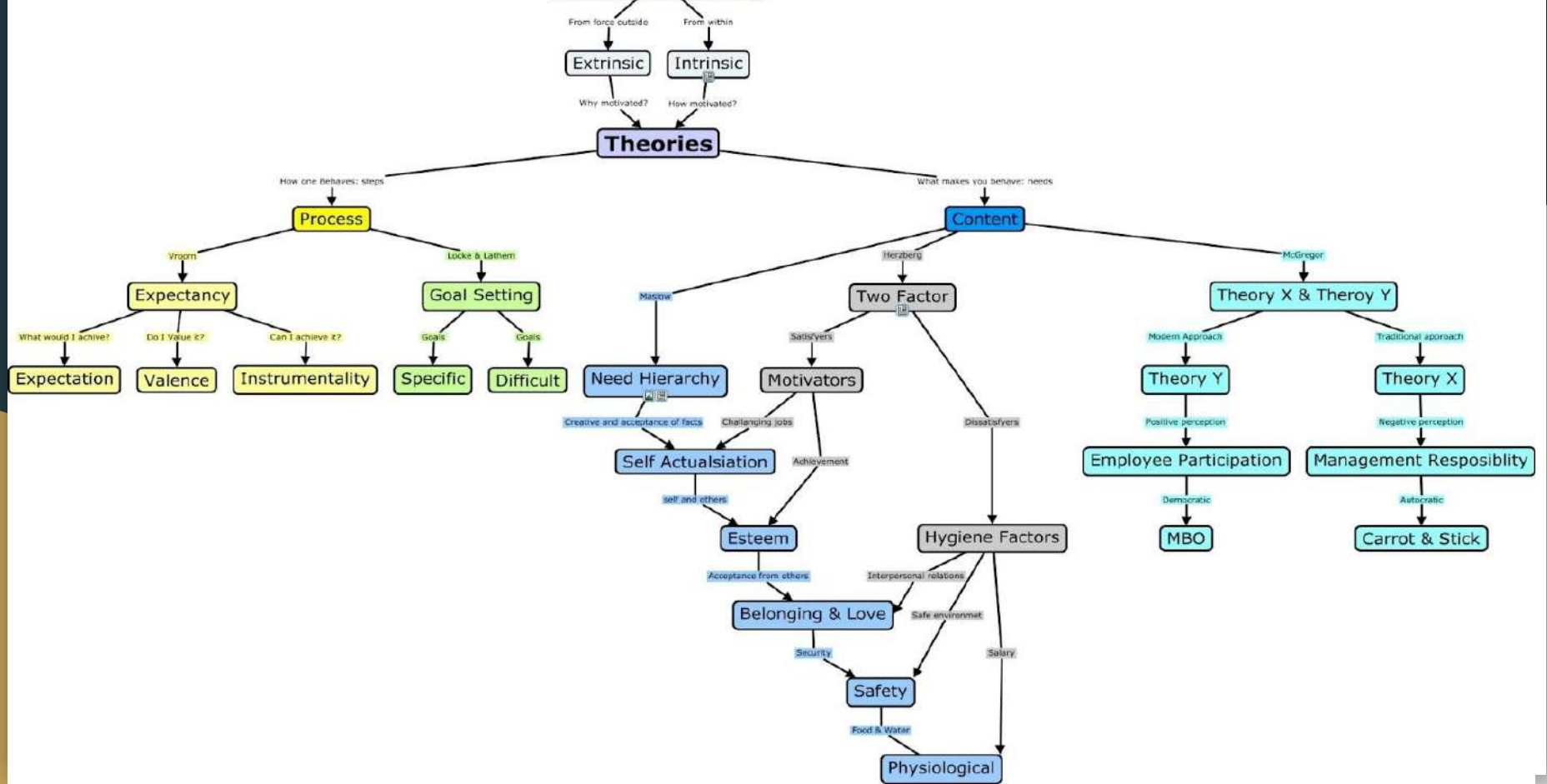
Difference between Concept map and Mind map

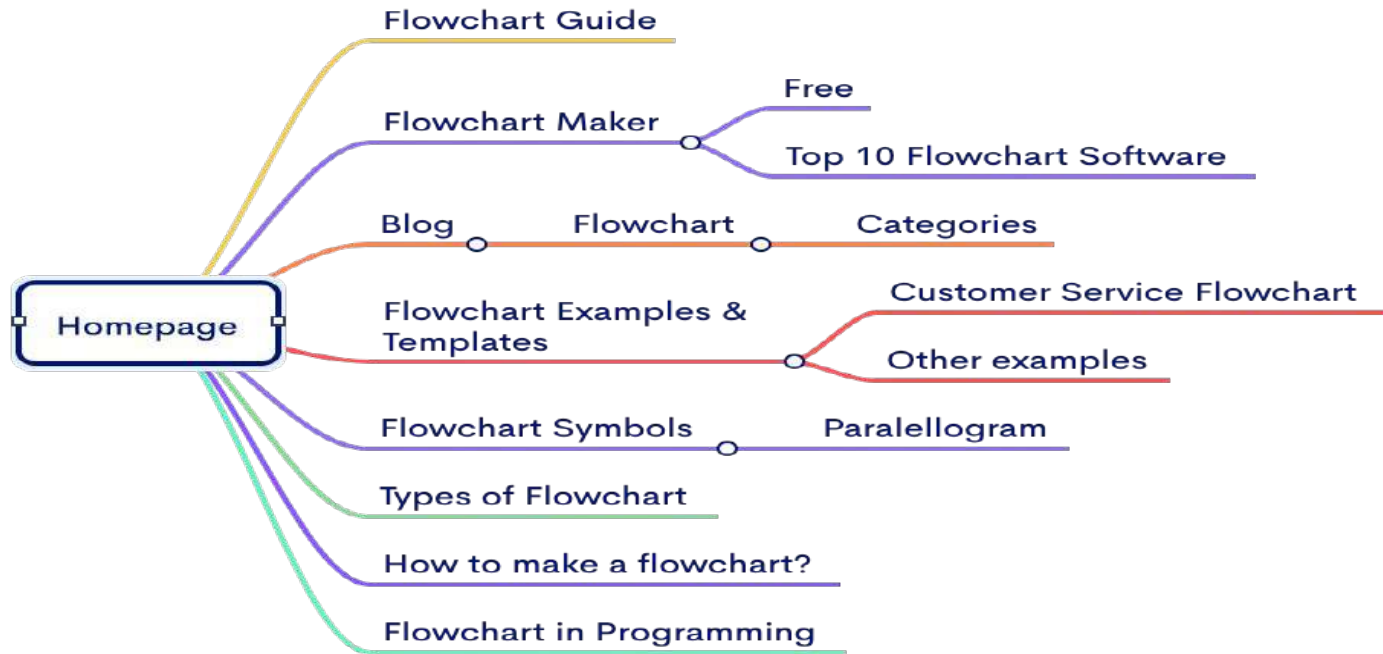
Mind map has a radial structure, while the concept map has a tree structure with many branches and clusters.

The concept map appears in big scope analysis with interconnected concepts, while a mind map is utilized in brainstorming for ideas organization.

Concept Map	Mind Map
Has more layers	Only have one layer
Built based on a fixed concept	Build based on individual preference
Objective	Subjective
Tackle various problems	Tackle single problem
Ideas linked by arrows	Ideas linked by straight lines
Every layer has a mutual relationship	One-side relation between the big idea to the detailed analysis.
Used in campaign management, restructuring the company operation.	Used in a single problem analysis

Motivation





When To Use Which one?

Based on the complexity of the problem, people can choose either a concept map or mind map. Multiple models are more feasible in a complex problem or strategy that a company/an individual has to come up with instantly.

It will take a lot of time to research and filter the information. The sub-branches in the conceptual model will help you list that option's potential advantages and weaknesses.

When To Use Which one?

If you have a tactic issue that cannot be analyzed in a big-scope map, mind mapping will be the ultimate choice. This small simulation focuses mainly on one aspect of the macro environment. Furthermore, you can use the graphical tool to highlight the keywords to understand the issue better.

Underlying Theory

Concept maps are based on Ausubel's Assimilation theory. This is built around the fact that new knowledge can be learned effectively by linking it to what is already known. Concept maps are seen as a methodological tool of this theory. Generate new ideas and add structure to your thoughts with concept maps..

Origin of Concept Maps

Concept maps were the outcome of a research done in the 1970s at Cornell University by Joseph Novak – an American Educator and Research Scientist – and his research team.

In order to study how children understand basic science concepts, they studied and interviewed many children.

Origin of Concept Maps

However, they found it difficult to identify the changes in the ways children understood science concepts with the detailed interview transcripts alone.

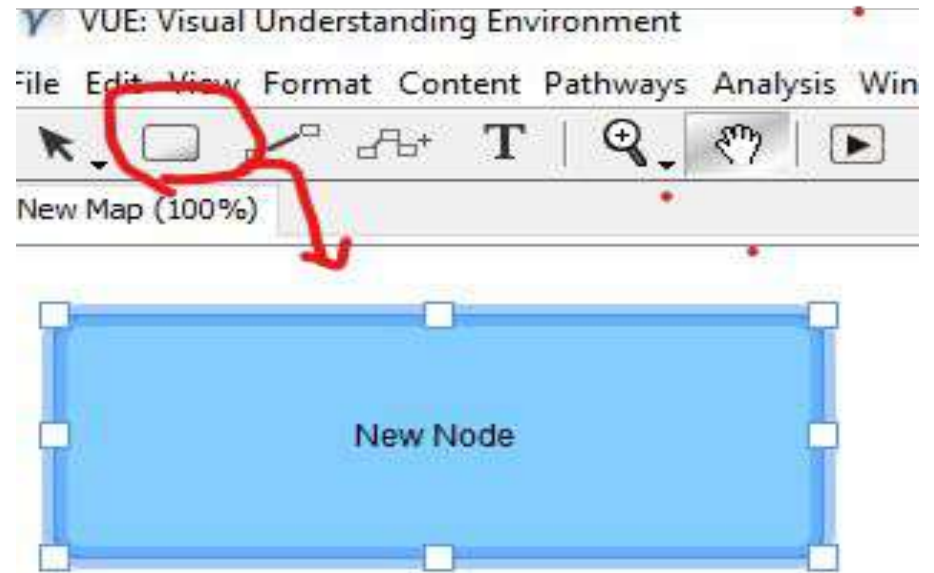
The need to find a better solution to represent children's conceptual understanding led to the development of the concept map in 1972.

The Key Characteristics of a Concept Map

Concept maps have specific characteristics that distinguish themselves from other diagrams that are used to represent knowledge. And they are,

Nodes

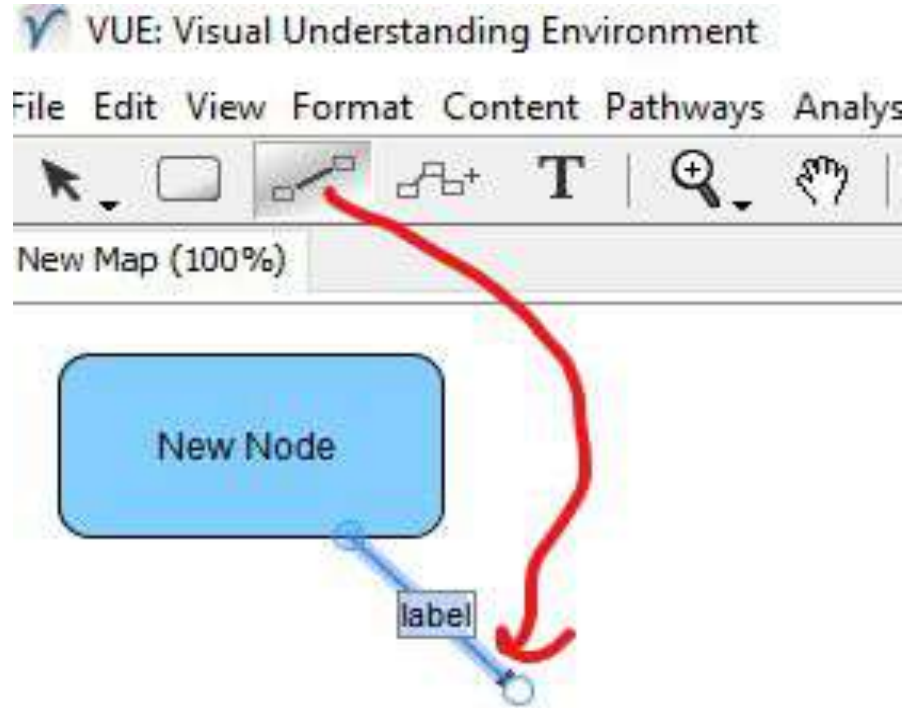
Nodes are the circles or the boxes that are used to represent a concept or an idea. These may vary in size, according to their hierarchy on the map; for example, more general nodes at the top of the map may be bigger than the more specific nodes that follow them.



The Key Characteristics of a Concept Map

Cross-Links

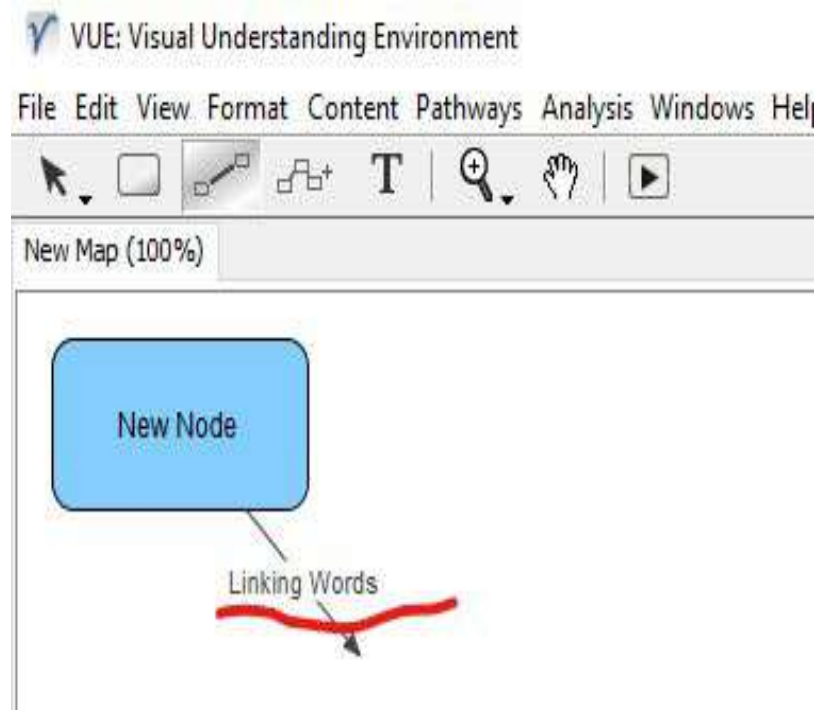
Concept maps consist of concepts in different domains. And the relationships between these different domains of knowledge are shown with cross-links.



The Key Characteristics of a Concept Map

Linking Words

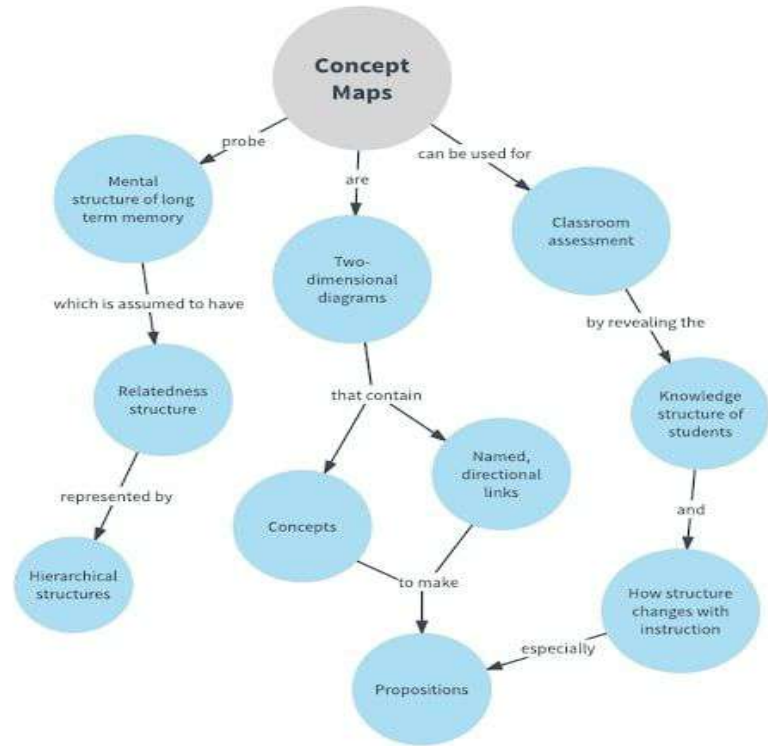
Or linking phrases if it contains more than a word. These describe the type of relationship between the two concepts and appear on the line connecting them.



The Key Characteristics of a Concept Map

Hierarchical Structure

Usually, concept maps are organized hierarchically. This means the most general and inclusive concepts are placed at the top of the map. Those that are more specific are positioned below them. Accordingly, hierarchical concept maps are read from top to bottom.



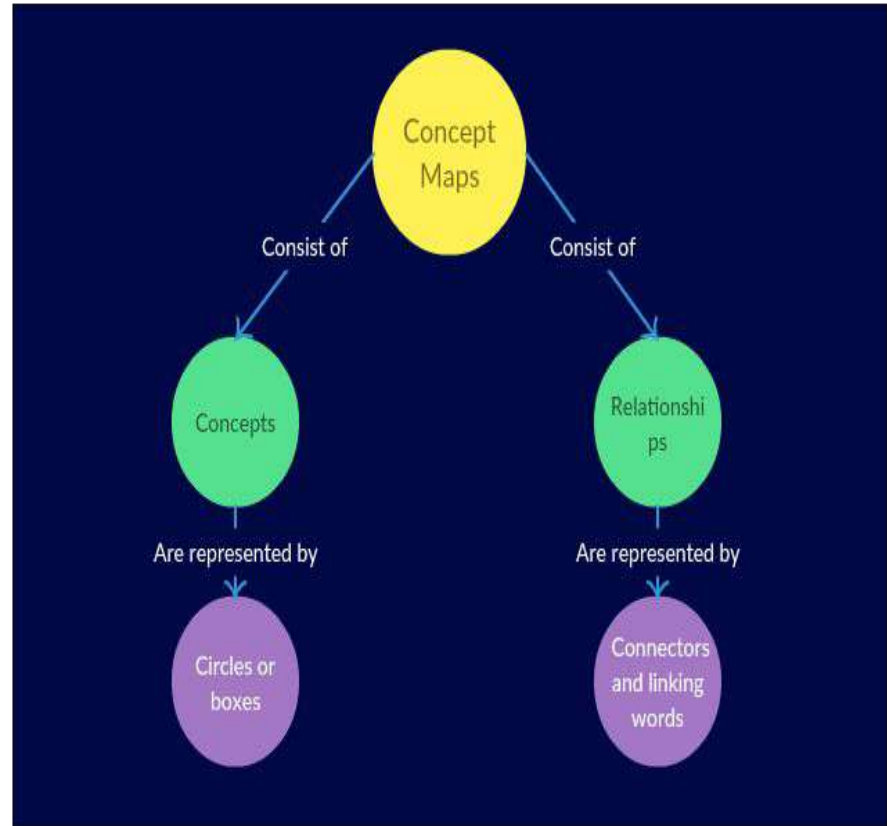
The Key Characteristics of a Concept Map

Propositional Structure

A concept map illustrates a set of meaningful propositions about a topic.

Every two concepts (in some cases more than two,) along with the linking phrases, form a meaningful sentence, otherwise known as a proposition.

For example, in the following concept map, the concepts “Relationships” and “Connectors and linking words” are connected by the linking phrase “Are represented by”. When connected, this forms the proposition “Relationships are represented by connectors and linking words”.



How to Draw a Concept Map?

Step 1: Pick a Topic

Step 2: Do a Quick Brainstorm

Step 3: Start to Draw the Map

Step 4: Connect the Concepts

Visual Understanding Environment

Visual Understanding Environment (VUE) is a concept and content mapping application, developed to support teaching, learning and research and for anyone who needs to organize, contextualize, and access digital information. Using a simple set of tools and a basic visual grammar consisting of nodes and links, faculty and students can map relationships between concepts, ideas and digital content.