

### Concept Mapping

Social scientists have developed a number of methods and processes that might be useful in helping you to formulate a research project. I would include among these at least the following " brainstorming, brainwriting, nominal group techniques, focus groups, affinity mapping, Delphi techniques, facet theory, and qualitative text analysis. Here, I'll show you a method that I have developed, called concept mapping, which is especially useful for research problem formulation.

Concept mapping is a general method that can be used to help any individual or group to describe their ideas about some topic in a pictorial form. There are several different types of methods that all currently go by names like "concept mapping", "mental mapping" or "concept webbing." All of them are similar in that they result in a picture of someone's ideas. But the kind of concept mapping I want to describe here is different in a number of important ways. First, it is primarily a group process and so it is especially well-suited for situations where teams or groups of stakeholders have to work together. The other methods work primarily with individuals. Second, it uses a very structured facilitated approach. There are specific steps that are followed by a trained facilitator in helping a group to articulate its ideas and understand them more clearly. Third, the core of concept mapping consists of several state-of-the-art multivariate statistical methods that analyze the input from all of the individuals and yields an aggregate group product. And fourth, the method requires the use of specialized computer programs that can handle the data from this type of process and accomplish the correct analysis and mapping procedures.

Although concept mapping is a general method, it is particularly useful for helping social researchers and research teams develop and detail ideas for research. And, it is especially valuable when researchers want to involve relevant stakeholder groups in the act of creating the research project. Although concept mapping is used for many purposes " strategic planning, product development, market analysis, decision making, measurement development " we concentrate here on its potential for helping researchers formulate their projects.

So what is concept mapping? Essentially, concept mapping is a structured process, focused on a topic or construct of interest, involving input from one or more participants, that produces an interpretable pictorial view (concept map) of their ideas and concepts and how these are interrelated. Concept mapping helps people to think more effectively as a group without losing their individuality. It helps groups to manage the complexity of their ideas without trivializing them or losing detail.

A concept mapping process involves six steps that can take place in a single day or can be spread out over weeks or months depending on the situation.

The first step is the Preparation Step. There are three things done here. The

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facilitator of the mapping process works with the initiator(s) (i.e., whoever requests the process initially) to identify who the participants will be. A mapping process can have hundreds or even thousands of stakeholders participating, although we usually have a relatively small group of between 10 and 20 stakeholders involved. Second, the initiator works with the stakeholders to develop the focus for the project. For instance, the group might decide to focus on defining a program or treatment. Or, they might choose to map all of the outcomes they might expect to see as a result. Finally, the group decides on an appropriate schedule for the mapping.

In the Generation Step the stakeholders develop a large set of statements that address the focus. For instance, they might generate statements that describe all of the specific activities that will constitute a specific social program. Or, they might generate statements describing specific outcomes that might occur as a result of participating in a program. A wide variety of methods can be used to accomplish this including traditional brainstorming, brainwriting, nominal group techniques, focus groups, qualitative text analysis, and so on. The group can generate up to 200 statements in a concept mapping project.

In the Structuring Step the participants do two things. First, each participant sorts the statements into piles of similar ones. Most times they do this by sorting a deck of cards that has one statement on each card. But they can also do this directly on a computer by dragging the statements into piles that they create. They can have as few or as many piles as they want. Each participant names each pile with a short descriptive label. Second, each participant rates each of the statements on some scale. Usually the statements are rated on a 1-to-5 scale for their relative importance, where a 1 means the statement is relatively unimportant compared to all the rest, a 3 means that it is moderately important, and a 5 means that it is extremely important.

The Representation Step is where the analysis is done – this is the process of taking the sort and rating input and –representing– it in map form. There are two major statistical analyses that are used. The first – multidimensional scaling – takes the sort data across all participants and develops the basic map where each statement is a point on the map and statements that were piled together by more people are closer to each other on the map. The second analysis – cluster analysis – takes the output of the multidimensional scaling (the point map) and partitions the map into groups of statements or ideas, into clusters. If the statements describe activities of a

program, the clusters show how these can be grouped into logical groups of activities. If the statements are specific outcomes, the clusters might be viewed as outcome constructs or concepts.

In the fifth step â€” the Interpretation Step â€” the facilitator works with the stakeholder group to help them develop their own labels and interpretations for the various maps.

Finally, the Utilization Step involves using the maps to help address the original focus. On the program side, the maps can be used as a visual framework for operationalizing the program. on the outcome side, they can be used as the basis for developing measures and displaying results.

This is only a very basic introduction to concept mapping and its uses. If you want to find out more about this method, you might look at some of the articles Iâ€™ve written about concept mapping, including An Introduction to Concept Mapping, Concept Mapping: Soft Science or Hard Art?, or the article entitled Using Concept Mapping to Develop a Conceptual Framework of Staffâ€™s Views of a Supported Employment Program for Persons with Severe Mental Illness.

## Reference

[When Waves Rise: Navigating Difficult Moments Associated with Dementia](#)

[Nursing - REA's Quick Access Reference Chart \(Quick Access Reference Charts\)](#)