

EFFECT OF CONCEPT MAPPING ON MYERS-BRIGGS PERSONALITY TYPES

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Abstract. The process of constructing a concept map is approached differently by each of the Myers-Briggs personality types because these types are characterized by different preferences for information processing. Sensing types are most at ease with linear thinking that sees knowledge in th

2.1 Extraversion and Introversion Preferences

Students differ in their preference for whether their best thinking is achieved through “talking it out” or through “thinking it through.” Those students who have extraversion preferences will have an easier and more effective learning experience if they can verbalize their learning as it is happening. This includes making mistakes or changing their mind...sometimes in mid-sentence. If they are kept quiet during their learning, such as during lecture, they will often carry on a dialogue silently in their head as an attempt to replicate their preferred mode of learning. While verbalizing learning is impractical in some learning settings, it has an energizing effect on study groups.

The opposite preference for introversion is seen in students who have a more effective learning experience when they are able to process new information quietly before it is discussed...if it is discussed at all. They also go through the process of changing their mind, but this is not visible. If they are required to speak about their learning they are very uncertain and uncomfortable unless they are given a moment to process the information. While this type of learning can lead to isolation from others, if used regularly in a study group it will bring depth of thinking to the group process. Thus, extraverts talk-to-think while introverts think-to-talk.

2.2 Sensing and Intuitive Preferences

Students differ in their preference for the way they give their attention to new information. Those students who have sensing preferences tend to trust information that is perceived directly by the senses, i.e. vision, hearing, touch (manipulation), taste, and smell. This information exists in the present as facts and details and carries a high degree of certainty. If a pattern or relationship exists, it is also perceived as a fact...but is only “discovered” as a relationship with great effort.

usually accomplished ahead of schedule and their course grades tend to be higher than their perceiving type-matched counterparts. They will tend to sacrifice learning additional information if that learning prevents them from completing their schedule. When studying in a group, they keep the group on task and help it to be more efficient.

The opposite preference for perception leads students to conduct their learning in a flexible and adaptable manner. They are motivated to discover new information that makes a more complete set of facts or a more complete pattern. They may attempt to fol

3.2 *The Quellmalz-Concept Mapping Connection*

Sensing type students focus their attention on the propositions that are the fundamental element of a concept map. These are the basic facts that are lin

(Figure 3). While sensing type students are uncomfortable constructing any cross-link that was not taught as a fact, they can learn this skill through an explicit, step-by-step process. Sensing type students who practice this process for several weeks will consistently comment that they “read differently now” or that they “see the material differently now.” They can’t describe how it is different, but they do display a significantly greater confidence with the process.

Figure 3. The construction of cross-links represents the comparison level in the Quellmalz framework. Comparison involves seeking out possible relationships between hierarchical branches. Cross-links can include a node or simply a linking qualifier. This map only has a single cross-link, but a cross-link could be constructed between each of the vertically juxtaposed nodes. Sensing type students are uncomfortable identifying a cross-link that was not explicitly taught as a fact.

4 Contribution of Map Construction to Learning In Different Types

Concept mapping helps to develop the learning skills that characterize each of the type preferences in different ways (Pelley and Dalley, 1997). This is described below for each of the four dimensions of MBTI type.

4.1

4.3 Concept Mapping for Thinking and Feeling Types

Thinking types will evaluate a map for its logical consistency. Its appearance will not matter as long as the construction makes sense to them. They may construct alternative maps to determine the most logical map and they will use readily use technology to make the process more efficient and more effective. Their logical orientation can lead them to challenge what they have been taught. A concept map drawn by a medical student resulted in an instructor modifying a lecture after trying to help a student who had mapped it (personal communication). The instructor concluded after attempting to make sense of the students map that his lecture needed to be re-organized. While a correct organization is also valued by a feeling t

how they read. This allows for a brief discussion of their thinking and an active learning moment as they modify their maps. They experience visible feedback on how to develop their thinking and they take away a greater sense of confidence in their ability to identify more complex knowledge independently. It will be rare for any student to request this assistance more than twice. They do return for a third visit, but only to report how much higher they have scored on their examinations.

5.4 Maps help to focus group problem solving.

Groups can develop maps from the beginning or they can compare maps prepared ahead of the session. When groups discuss or build concept maps the participants help to develop each others thinking. The sensing types are helped to develop their intuitive skills as they hear intuitives verbalize their thinking. Similarly, intuitive types are helped by sensing types to include all of the details, not just those that establish a basic pattern. The visual structure kee

