**Title:**
Can Concept Mapping Be Used as a Strategy to Engage Learners in Nursing Education?

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Concept maps, active learning and student engagement

**References:**
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**Abstract Summary:**
Nursing educators must select teaching and learning strategies which engage students and which promote higher-level critical thinking. This presentation explores the impact of using concept maps on faculty engagement and impact on critical thinking.

**Learning Activity:**

| LEARNING OBJECTIVES | EXPANDED CONTENT OUTLINE |
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| Nurse educators will identify concept mapping as a valuable learning strategy which can be used a variety of nursing topics using the nursing process. | Background of concept maps will be provided to learners. Learners will also be taught how concept mapping can be used to teach a variety of topics such as Pathology and Pharmacology. |

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| Nurse Educators will recognize the ability to use concept mapping to engage learners in active learning. | Participants will have an opportunity to work in small groups and develop a concept map which identifies the 5 elements of the nursing process, using a case study approach. |

**Abstract Text:**

**Purpose:** The purpose of this paper was to evaluate if nurse educators would embrace concept mapping as a method to engage students in active learning.

**Background:** Nursing educators share a common struggle when teaching nursing students; keeping students engaged in the learning process. Nurse educators must assist learners to balance the recall of content knowledge with development of cognitive skills. To accomplish this goal, learners must retain, recall, synthesize, transfer, and apply this knowledge. Ausubel's Assimilation theory provides the framework for this topic as the framework is built on the nature of cognition and connecting concepts from prior learning to newly acquired knowledge. Knowledge of content is vital to nursing education. Concept maps are a visual tool that encourages student to apply nursing theories and concepts by organizing information and analyzing relationships between concepts. Concept mapping encourages visual displays of information, which engages multiple areas of the brain. Retention, retrieval and transfer of this knowledge can be facilitated by engaging a variety of areas in the brain. The use of illustrations may be especially helpful to students facing a language barrier. Concept mapping pushes students beyond routine memorization to develop knowledge and reasoning skills needed for complex patient care.

**Methods:** During an educational session, nurse educators were provided a pre-survey (N=21) to gather demographic information and current familiarization of concept mapping as a teaching and learning strategy. The survey participation was anonymous and voluntary. During the session the participants were provided with a brief outline of the use of concept mapping as a teaching and learning strategy in a variety of courses. After the introduction on concept mapping the participants were placed into groups of five to create a concept map. A diabetic case study of an elderly gentleman was shared with the participants. Each group member was given a notecard with part of the nursing process (assessment, diagnosis, planning, intervention, and evaluation) to summarize the key components of the case study. After mapping the information on a large sheet of paper, each group was asked to create a multiple-choice question focusing on a potential complication and/or potential nursing intervention that could develop in the case study.

Following the concept mapping activity, a post survey (*n*=19) was administered. The post survey used a 5-point Likert scale regarding the faculties' perceptions about concept mapping as a method to engage and promote thinking skills.

**Results:** The pre-survey which had questions related to demographics and questions such as "I find concept maps confusing". The same participants also completed a post-survey which asked questions such as "I plan on using concept maps as a teaching and learning strategy". The survey used a 5-point Likert Scale rating *(5=strongly agree, 1=strongly disagree).*

Demographic results: The average age of the participants was 45-54, and the average length of time teaching was 6-10 years. The last question on the pre-survey asked " Do you find it is sometimes difficult to keep students engaged in the classroom"? As a group, 14/19 participants reported it was always (*n*=2) or sometimes (*n*=12) a problem.

Concept mapping questions: The majority of the group had used concept maps and did not agree or disagree when asked if they find concept maps confusing.(*M*=2.5, 2.7) The majority of the participants indicated that they "like to try different teaching and learning strategies to facilitate critical thinking" (*M*=4.6) "I would like to use concept maps to help me prepare for lecture" (*M*=4.0)

The consensus for the last question “I understand how concept maps can be used to outline the nursing process” was neutral (neither agree or disagree)(*M*=3.0)

Post-survey results: The majority of the participants (*M*=4.4) plan on using concept maps as a teaching and learning strategy and found that concept maps can be a visual display of information which can link the nursing process together (*M*=4.6). The majority of the group (*M*=4.6 reported that they agreed that they would like to use concept maps to help prepare for lecture and that concept maps can be a valuable teaching and learning strategy which promotes critical thinking (*M*=4.6). When asked “I found that completing a concept maps as a group, engaged my attention, the majority of the group agreed (*M*=4.4).

**Conclusion:** Prior to the group activity the majority of participants agreed that keeping students engaged in the classroom can be difficult. Following the group activity the majority of faculty agreed that concept mapping is a valuable teaching and learning strategy which promotes critical thinking. The group also reported that they found that completing the concept maps as a group activity engaged their attention. Concept maps can be a valuable teaching and learning strategy used in nursing education. The creation of concept maps as a group activity can engage the learner in the nursing process.