

**Concept Mapping: Development of a Model for Practice and Research**  
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**Problem:** Nursing instructors seeking to instill critical thinking skills and to prepare their graduates for the NCLEX© examination spend hours grading care plans that are considered busy work by students. Concept mapping has been suggested as an alternative.

**Evidence:** Fourteen studies and evaluations of concept mapping were reviewed.

**Strategy:** A systematic search of the literature was conducted using the CINAHL and ERIC databases.

**Results:** Five of the studies reported increases in learning outcomes, including examination, critical thinking, learning approach, and self-regulation of learning scores. Only one of these five studies was experimental. Nine of the studies reported an increase in concept mapping scores with instruction and practice. A few noted student satisfaction with the assignment. Four of the nine provided anecdotal evidence only; four were quasi-experimental, and one was experimental. All of the nine studies demonstrate that instruction and practice increase concept map scores or abilities. However, using the concept mapping score as the dependent variable meant researchers were actually evaluating the effectiveness of the independent variable (instruction and practice) rather than the effect of concept mapping on learning outcomes.

**Practice Change:** Based on the evidence, a model was constructed to guide practice and future research on concept mapping as a teaching intervention in nursing education.

**Evaluation:** The evidence in favor of using concept mapping is currently underdeveloped. The model proposes that instruction and practice on concept mapping leads to improved learning outcomes (such as instructor examinations, standardized examinations, and clinical performance) and student satisfaction with educational experiences. This model will be tested in future studies.

**Recommendations:** Concept mapping is a promising alternative to graded care plans for teaching students to think critically. However educators using concept mapping should document and report its effects on learning outcomes with experimental studies before fully embracing the methodology.

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