



## Using concept mapping to build clinical judgment skills

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### ABSTRACT

This article is a description of educational innovation that utilizes concept mapping as a teaching strategy in the development of critical thinking skills of undergraduate nursing students. A concept mapping rubric was designed using Tanner's Clinical Judgment Model to guide students ( $n = 8$ ) in the construction of clinical cases for the development of appropriate clinical judgment skills. Each student evaluated the concept mapping exercise and provided feedback regarding the rubric, their understanding of the clinical situation, and the development of clinical judgment skills. The students expressed that the concept mapping activity and rubric lead them to make better clinical decisions and increased clinical judgment skills. Content analysis is the research method used to make inferences from qualitative data, with the purpose of providing new insights and clinical knowledge regarding this teaching strategy. Future recommendations for the use of this teaching strategy include shortening the wording and descriptions for each stage of evaluation to promote ease of use for the student in the growth of critical thinking skills.

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### Introduction

Clinical judgment is described by [Tanner \(2006\)](#) as a flexible and distinct ability to recognize salient aspects of an undefined clinical situation, to interpret their meanings, and respond appropriately. It is essential for nursing students to develop clinical judgment skills. However, nurse educators have struggled to uncover teaching strategies that aid in the development of strong clinical judgment skills. Concept mapping is a teaching strategy which is gaining popularity in nursing education due to its ability to facilitate active learning and enhance the development of clinical judgment skills ([Wilgis and McConnell, 2008](#)). Nurse educators have recently adopted concept mapping for use in a variety of clinical and classroom settings. This strategy encourages student-discovery while learning and allows for the examination of a student's individual decision making process ([Caputi and Blach, 2008](#)).

A concept map is a schematic device representing a set of concepts embedded in a framework of propositions ([Novak and Gowin, 1984](#); [Novak, 1991, 1998](#)). In other words, a concept map is a diagram that shows multiple relationships among concepts. Concept maps help organize individual thoughts, and represent knowledge. Concepts or topics, which are represented in circles or boxes, are connected by words or phrases that explain the connection between the ideas. This structure is helpful to students as they organize their thoughts to discover new relationships.

Concept mapping has been successfully used in many disciplines, including education, chemistry, mathematics, and policy studies. Nursing students use concept maps to organize knowledge structures from which critical thinking and decision making skills are built in both the classroom and clinical setting ([Hicks-Moore and Pastrick, 2006](#); [Hsu and Hsieh, 2005](#); [Wilgis and McConnell, 2008](#)). Concept maps are used in the clinical setting to help students' bridge the gap between theory and clinical practice by revealing crucial relationships within the clinical situation ([Harpaz et al., 2004](#)).

The use of concept maps in the clinical setting has focused on identified criteria for concept map development, rather than the utilization of concept maps as guide to aid in the development of clinical judgment skills. In the nursing literature, there are sources that apply Tanner's Clinical Judgment Model to build appropriate clinical skills ([Lasater, 2007](#); [Lasater and Nielsen, 2009](#)). [Lasater \(2007\)](#) developed a rubric based on Tanner's four phases of clinical judgment to aid students in the formation of competent interventions during the clinical simulation experience. Lasater's rubric also was also used as a self-evaluation and reflection tool for the student to help them evaluate their strengths and weaknesses during the simulation experience.

### Theoretical framework

The origins of concept maps stem from the Constructivist Theory. Constructivists hold that learning is constructed by

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a student through the resolution of conflict and reflection about the theory (Novak, 1998). Constructivism encourages a student's self exploration within a given framework. In clinical practice, complex concepts are selected and constructed by the student in the context of their own individual goals or purposes. Concept mapping, specifically in the clinical setting, aids in the development of communication (O'Donnell et al., 2002), teamwork (Dabbagh, 2001), group dynamics, critical thinking (Wheeler and Collins, 2003), and decision making skills (Wilgis and McConnell, 2008). Students can analyze the links that are being made to develop new understandings and create new knowledge that provides a foundation for sound clinical judgment skills (Ankinsanya and Williams, 2004).

Assimilation Theory (Ausubel et al., 1978) also supports the theoretical foundation for the technique of concept mapping. According to Assimilation Theory, students incorporate information into their existing knowledge frameworks or knowledge schemata. Further, Ausubel summarizes effective learning as a process in which learners comprehend the structure of knowledge and consciously make new structures that fit with the existing organization of concepts in the brain. He refers to this process where new ideas or concepts are linked with previously acquired knowledge as meaningful learning (Novak, 1998). If an individual is presented with new information that possesses characteristics which enable the learner to associate it with previous learning, the student will more readily understand and learn the new concepts because they are meaningful to them (Ausubel et al., 1978).

### Advantages of using concept maps

There are numerous advantages of using concept mapping in all nursing degree programs. Concept maps combine a significant amount of information on one page, and provide a simple way for students to view their thoughts and the relationships between several topics. Students can identify new concepts and relationships, while recognizing areas that may require additional research or elaboration. The visual representation of concept mapping is composed of symbols which can be read quickly. The minimal uses of text or words make it easy to scan for a word, phrase, or the general idea that is being explored. Also, this visual representation allows for development of a holistic view of the entire clinical situation (Caputi and Blach, 2008).

Concept maps facilitate the acquisition of knowledge through meaningful learning. In the clinical setting, the tool can be used to correlate a patient's diagnosis, symptoms, treatments, interventions, and outcome criteria. This is an effective teaching method for promoting critical thinking and is an effective way to evaluate students' clinical judgment because it is a raw visual representation of a student's thinking (All and Havens, 1997; Massarweh, 1999; Wheeler and Collins, 2003).

Concept maps also are considered to be effective self-evaluation tools. Mapping concepts in this format makes it simple for students to recognize information, and review the sequence of their thought processes. Concept maps identify strengths and weaknesses in their thinking patterns, and the maps provide an opportunity to think about a clinical situation in multiple ways. If a mistake is discovered during the period of evaluation and reflection, students are able to trace thought patterns back to the initial point at which the mistake was made. Reflection-on-action contributes to the growth of clinical knowledge development and increases clinical judgment in future situations (Lasater, 2007). Students have the opportunity to examine the clinical situation as a whole and develop a deeper understanding of the contents, relationships and patient priorities.

### Challenges of using concept maps

While concept maps can be vital teaching tools in the clinical setting, the nurse educator must overcome difficulties in implementation. Instructors must learn how to actively utilize this clinical teaching technique. Development and orientation to the activity are crucial to the success of using concept maps in the clinical setting. The instructor develops information in a way that helps the student achieve optimal learning outcomes. Primary relationships and main points are shown in a logical manner, from simple to complex. Learning to use the tool in the clinical setting may be a lengthy process for the students to acquire, and they should be familiar with the process of concept mapping prior to the construction process in the clinical setting. This is a crucial step if concept maps are to stay coherent (Canas and Novak, 2005). If not introduced properly, there is the chance that a concept map could become overloaded with information in both content and connections. This will make the map more difficult to follow and interpret, which would be a barrier to developing fundamental clinical judgment skills. Students must be reminded to construct simple maps with a consistent hierarchy.

### Purpose of the Clinical Judgment Self-Evaluation Rubric

The purpose of this article is to describe the development and evaluation of a clinical rubric for concept mapping to facilitate the growth of essential clinical judgment skills in junior level nursing students enrolled in an Adult Health nursing course. The foundation of this clinical rubric, called the *Clinical Judgment Self-Evaluation Rubric*, is based on the four phases of Tanner's Clinical Judgment Model; these phases consist of *noticing*, *interpreting*, *responding*, and *reflection* (Tanner, 2006). The four phases of Tanner's Model provide guidance in the clinical setting to help the student form appropriate interventions in unfamiliar situations (Lasater, 2007).

The *Clinical Judgment Self-Evaluation Rubric* is not meant to evaluate the actual construction process of the concept map, but instead focuses on whether utilizing the four phases of Tanner's Model during the creation of the concept map leads to strong and competent clinical judgment skills in the student. During the *noticing* phase of the exercise, the student should consider if the use of the concept map helps to focus their observations relating to the clinical topic and recognize important patterns in the data. In this step the student utilizes the concept map to help them gather information and identify deviations or abnormal data. This first step sets the stage for the development of interventions and priorities that are critical in the later phases of the mapping exercise. For example, students will focus on important subjective and objective patient data as they begin to identify priorities.

The student should refer to the *interpretation* portion of the rubric to evaluate whether the concept map helps them organize the initial assessment data collected. This section of the rubric narrows the focus to the most relevant and important information relating to the clinical situation. The student analyzes information based on laboratory values, diagnostic tests, and physical assessment to identify and uncover clinical patterns to develop ideas for the prioritization of successful interventions.

When evaluating whether the exercise helped the student to *respond* in a way that promoted critical thinking, the student considers whether or not the concept map outlines appropriate communication, decision making and judgment skills. The student should be confident in the decisions that were made regarding the construction of the concept map. The student evaluates their ability to communicate effectively with other members of the clinical

team. It is crucial that they identify whether the concept map helped them utilize their judgment skills to fully assess the clinical situation. They can examine the linkages and relationships made between concepts to determine if their thought process reflects appropriate clinical judgment skills. This phase will ensure that students have produced successful interventions and outcomes for the clinical scenario.

The final portion of the rubric centers on self-analysis and future improvement. During the *reflection* phase, the student evaluates their own personal experience with concept mapping and the ability of the exercise to facilitate the growth of their clinical judgment skills. They consider if the map is organized, complete, and reflects a logical thought process. Students analyze their personal decision making skills relating to the clinical situation. They critically reflect on whether the concept map elicits successful and appropriate interventions based on priorities that have been determined in earlier phases of the activity. The clinical instructor needs to encourage peer involvement at this phase, and provide feedback on the strengths and weaknesses concerning the clinical situation and individual judgment skills of their peers.

This rubric divides each phase into essential traits or dimensions so that they can be evaluated separately by the student. A score of “excellent”, “good”, “marginal”, or “poor” is given for the criteria described in each phase. Giving each student the opportunity to score each phase separately will help them identify weak areas in the analysis of the clinical situation. This activity will aid the student in building a complete clinical situation so they can provide a more holistic approach to their care. They will identify important information relating to care, develop appropriate interventions pertaining to the clinical situation, and provide rationale for their decisions relating to clinical judgment. The rubric provides logical steps that will elicit competent clinical judgment skills from the student. It will help the student meet the challenge of making competent clinical decisions so they may continuously improve the quality and safety of the care they provide in their daily practice.

The rubric is based on the requirements for safe nursing practices and essential Quality and Safety Education for Nurses (QSEN) competencies. The student exhibits a theoretical understanding of health, diseases, pathophysiology, and management of symptoms. The use of the *Clinical Judgment Self-Evaluation Rubric* helps the student focus on the analysis of data that has been gathered in assessment and their competence in critical thought processes. Further, the student should exhibit competence in communication with peers, staff, and other members of the interdisciplinary team to gather information to apply during the concept mapping activity. The *Clinical Judgment Self-Evaluation Rubric* assists the student to make competent decisions regarding patient safety and other care responsibilities.

## Methods

Students ( $n = 8$ ) enrolled in a four-year baccalaureate nursing program who were in the second-term of their third year of nursing school participated in this pilot study. The students that participated were selected at the convenience of the author. They were in their first adult medical-surgical clinical course. Written and verbal consent was obtained from each student before they participated in the clinical learning exercise. These students had been introduced previously to concept mapping in a nursing fundamentals course. It is an integral component of the curriculum throughout the program. Each student provided 12 h of patient care at a hospital one day per week for six weeks. Based on the diagnosis of their patient, each student completed one concept map every week. The most common diagnoses seen among the patient population were Chronic

Obstructive Pulmonary Disorder (COPD), Myocardial Infarction (MI), Diabetes Mellitus (DM), and renal sufficiency/failure.

During the initial phase of the concept mapping exercise, the students working in groups, constructed one concept map based on a case study of a patient with the diagnoses of COPD. This case study data consisted of objective and subjective assessment information, possible exams and results, laboratory values, possible treatments, safety issues, and other psychosocial, and cultural considerations. The group concept map exercise took 45 min, and was followed by a 30-min debriefing period. During the exercise, students used the rubric to guide them toward appropriate interventions and clinical judgment skills. The instructor facilitated this exercise by providing guidance and feedback regarding assessment data, prioritization of information, the appropriateness of interventions based on the clinical situation, and the thought process used by each student. Once the group concept mapping activity had been introduced and practiced, students were to work individually on their own map based on their patient's diagnosis. These maps were developed weekly for the remainder of the clinical rotation. This provided opportunities for each student to critically assess and evaluate multiple clinical situations. It also allowed them to understand the rationale behind successful interventions across a variety of diagnoses.

## Findings

After the completion of the module-long concept mapping exercise, a group discussion was used to evaluate all students to provide evaluative feedback on the activity. The focus of the discussion centered on the evaluation of the concept mapping rubric. Students shared their opinions regarding the strengths and weaknesses of the rubric and explained how it was helpful in the development of clinical interventions and clinical judgment skills. Comments given regarding strengths, weaknesses, and the ability of the rubric to lead the students to appropriate interventions are summarized in Table 1.

Students described the rubric as beneficial in the areas of prioritization, keeping them “on track” during the mapping exercise as it helped to organize thought processes, and in the facilitation of discussion concerning clinical decisions and nursing interventions. Many of the students' comments focused on the benefits of the debriefing period, and the opportunity to discuss several different patient diagnoses as a group. The discussion between students provided the chance for peer and self-evaluation pertaining to rationale for care, interventions, patient outcomes, and appropriate clinical judgment skills. In addition, the discussions promoted increased awareness among the students as they could examine their own thought processes in the construction of the concept map. Students identified areas for improvement, and collaborated with peers to help uncover behaviors and decisions that required correction. The experience of discussion and self-reflection allowed students to become aware of their strengths and weaknesses, so they could make competent decisions pertaining to care in the future. At the conclusion of the six week period, six out of eight (75%) students verbalized a progression from simply identifying a patient problem, to the actual use of data and assessment information to determine priorities, interventions and successful outcomes for their patient.

Student feedback indicated that the *Clinical Judgment Self-Evaluation Rubric* provided guidance for developing clinical judgment in undergraduate nursing students. Students were asked to evaluate if the rubric helped them develop direction for assessments, plans of care, and successful interventions. At the conclusion of this study, six out of eight (75%) students determined that the rubric helped identify the most relevant information pertaining to the clinical situation. Of the eight students in the group, six (75%)

**Table 1**  
Concept mapping rubric: student comments.

Strengths	Weaknesses
The discussion that came from talking about the rubric was so helpful. I learned the most from talking about all the maps. I got a chance to learn about many diagnoses, assessments, interventions, and decisions about care based on different situations.	I felt like some of the descriptions on the rubric were a little wordy. It would be more helpful if it was shorter and more concise.
Having the rubric helped me to prioritize my patient's information and it went through the different phases step-by-step so I could create the best interventions for my patient.	I thought it was hard to evaluate myself with the rubric. I think that's probably because I didn't have anything to compare it too.
I thought the descriptions of each phase were helpful because it kept me on track during the entire exercise and when I was thinking about interventions for my patient.	I think concept maps are limiting for me in some ways. I understood the reason for the rubric, but it gave a lot of criteria for each phase. I ended up skimming some of it instead of actually reading it. The descriptions should be shorter.
My patient had a diagnosis of acute renal failure. This is a very complex diagnosis that affects multiple body systems. Using the concept mapping rubric to organize my thoughts and look at different relationships proved to be very helpful when I was thinking about interventions.	
The rubric helped me to pick out the most important information and recognize what I really needed to focus on with my patient.	

said that the description criteria within the rubric allowed them to evaluate if they were making the right clinical decisions for their patients. Four of the eight students (50%) stated that they appreciated the depth that the rubric provided, and that it made it easier to focus on the most important information about their patients.

Responses indicated that two of the students (25%) thought that concept maps did not suit their learning style or preference in the presentation of information. They verbalized that having the information presented in the format of a case study was more beneficial in processing important patient information and developing clinical judgment skills.

The students provided information to the instructor about the areas where they made the most progress during this experience. Five of the eight students (62%) stated that they made the greatest progress in the prioritization of important information concerning their patient. They felt more confident and accurate when interpreting laboratory values, anticipating future orders and diagnostic tests, and recognizing abnormal assessment data.

In addition, the findings revealed that seven out of eight students (87%) said they developed stronger communication techniques, teambuilding skills, and increased ability to synthesize information as a result of the exchange of dialog during the debriefing period. They were exposed to questioning from their peers, multiple reasoning patterns, the nursing process, and clinical case management during the debriefing process.

## Discussion of findings

According to a study by Hicks-Moore (2005), communication and debriefing enhances student learning and synthesis in the clinical setting. Allowing students to share concept maps during clinical debriefing provided the opportunity for peer feedback on clinical events. The chance for peer-to-peer questioning, and sharing information helped students to recognize data that they may have not previously gathered or considered. The students verbalized that the debriefing period was extremely helpful because they were able to converse with their peers about each situation, which fostered new ideas for care and interventions that could be utilized in future. Each of these aspects contributed to the development of strong clinical judgment skills.

Another crucial component was to determine whether the rubric identified important aspects in the development of clinical judgment skills. Five out of eight students (62%) described the rubric as a tool that provides logical steps toward appropriate nursing interventions. Students felt the rubric assisted them in decision making and cohesion in clinical judgment skills. The students stated that participation in the activity assisted them to

synthesize new and existing knowledge and information, so they could see the “big picture” in a specific clinical situation. These findings were consistent with a study conducted by Lasater (2007), where students verbalized that language from Tanner's Model provided steps toward appropriate clinical judgment skills. Similarly, a study by Gillespie (2010) identified that utilizing a multidimensional perspective, such as Tanner's Clinical Judgment Model, allows for the use of a variety of reasoning processes in prioritizing information and making competent clinical decisions.

Based on student feedback, the limitations of the rubric included the length and depth of criteria for each phase of the rubric. While the rubric was helpful in determining priorities, interventions and outcomes, some students found the depth and length of the rubric difficult to follow or understand. There was a consensus among students that the rubric descriptors should be shorter and more concise. Students commented that the rubric was “wordy” at times. Several students “skimmed” the criteria described in each phase, rather than reading then completely because of the lengthy descriptions of each phase. The rubric can be revised for future use to accommodate ease of use for the student. The criteria for each phase could be condensed by providing bullet points for the main components. Rephrasing the criteria to eliminate unnecessary wording will make the rubric appear less overwhelming for the student during the evaluation period.

These findings are constant with a study conducted by Lasater (2007), which discussed the creation of a rubric based on Tanner's model. Lasater's rubric was applied to a simulation clinical learning exercise, but comments made by the students regarding depth and length were similar to this experience. In both instances, students gained confidence in communication, learning to proceed and prioritize client needs, and identify incorrect behaviors.

During the debriefing period, increased discussion about self-evaluation could be done. Initially, students found it difficult to evaluate their maps and performance because their knowledge base did not allow them to compare clinical experiences. As time progressed and their clinical knowledge increased, the students commented that the discussion surrounding self-evaluation was beneficial. It helped them convey new and existing nursing knowledge, priority nursing interventions, personal responsibility, collaboration with other health care professionals and management of emergent situations. They felt more confident in the recognition of abnormal data, and in their actions for providing care.

There was an increase in peer conversation and collaboration as a result of the exercise. In the initial phase, students relied heavily on cues and suggestions from the instructor to determine patient care needs. They were intimidated by unexpected changes that could occur in the clinical setting. As the study progressed, student conversation

regarding the prioritization of information to make correct decisions increased. There was a positive change in the ability of the students to connect theoretical knowledge into a practical clinical experience. They generated interventions for care with minimal cues from the instructor, and were able to manage changing priorities in the delivery of nursing care. There was an increase in teamwork between students, and they were able to adapt appropriately to the clinical situation. They combined their problem-solving and communication skills to successfully handle each clinical situation.

One of the most difficult tasks for any student is the identification and management of personal clinical strengths and weaknesses. However, it is a necessary step in providing safe and competent patient care. The concept mapping activity and discussion helped students to identify areas that required improvement in the clinical setting. Knowledge gaps became evident during the examination of concept maps, and peer discussions. Identifying and verbalizing limitations allowed the students to lessen, or even eliminate, the impact of their clinical weaknesses. This process was beneficial because it provided an opportunity for peer and instructor feedback, which assisted the students in problem-solving and ways to improve individual weaknesses. This enhanced clinical performance and quality of care because students were able to focus on their clinical strengths, while managing and working through weaknesses.

In the future, this teaching strategy and rubric should be applied to a larger number of students in a variety of clinical settings.

Utilizing the rubric in critical-care, pediatrics, community health, mental health and other areas could increase students' knowledge, clinical judgment skills, and competencies specific for those settings. Using a larger student sample will help to determine if the rubric and concept mapping activity are applicable to all clinical settings.

## Conclusion

Nursing requires a balance of academic and practical skill integration for effective incorporation of theory to practice. Concept maps provide students with a tool to understand the relationships between client data in the clinical setting. The rubric helped the student organize their thoughts, plan the care of their patient, prioritize and critically think. The positive response to the rubric and concept mapping activity in the clinical setting supports further studies to evaluate its ability to link nursing theory to practice. Using the rubric in combination with the concept map is an interactive way to promote self-directed learning, while fostering the growth of crucial clinical judgment skills in nursing students.

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## Appendix A

Using Concept Maps to Enhance Clinical Judgment: Rubric  
Based on the Four Phases of Tanner's Clinical Judgment Model

Phase	Excellent	Good	Marginal	Poor	Comments
"Noticing"					
"Interpretation"					
"Responding"					
"Reflection"					

Please include any other comments regarding the use of the concept maps to analyze clinical situations:

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## Rubric criteria

Phase	Excellent	Good	Marginal	Poor
<b>"Noticing"</b> <b>Did the use of the concept map help the student focus their observations, recognize patterns, and gather information to create ideas in the</b>	The concept map focus the student's observations relating to the topic and gathering subjective / objective data; Students are able to focus on the most important information, to recognize patterns and	The concept map allows the student to recognize most of the useful information; both subjective and objective data are identified, but may have missed some	The student focuses on the main topic, but was overwhelmed by the collection of data; feels like they could focus on	Confused by the concept map, presentation of clinical situation, and types of data; missed important information which could lead to clinical errors; only could focus on

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(continued)

Phase	Excellent	Good	Marginal	Poor
<b>development of interventions based on priorities?</b>	deviations in the information, and form ideas for appropriate interventions based on the information depicted in the map.	subtle information; The student actively seeks information about clinical situation but does not completely explore important leads in the development of ideas for interventions.	the most important information, but may have overlooked important information; unsure of next step in relation to the situation; did not fully understand what information to illicit when developing ideas for interventions.	one concept at a time, unable to see clinical situation as a “whole” using the map. There was not enough information to develop sufficient interventions for the clinical situation.
<b>“Interpretation” Did the concept map help the student make sense of the data and to appropriately prioritize the information relating to the clinical situation?</b>	The concept map helps the student focus on the most relevant and important information relating to the clinical situation. The student made sense of clinical patterns, and develop ideas for the prioritization of successful interventions relating to the clinical situation.	Generally focuses on the most important data, but becomes distracted by information that is less important. In most situations, interprets data correctly. The student uses prior knowledge to develop interventions/plans, but feels like they need the guidance of an experienced professional in complex situations to prioritize information for successful interventions.	Attempts to prioritize important data, but also focuses on less relevant or useful information. In familiar situations the student is able to identify patterns and to produce interventions; but in complex clinical scenarios they experience difficulty with data and clinical situation. Relies heavily on outside assistance to prioritize information for successful interventions.	The concept map is confusing, and student is unable to identify the most important data regarding the clinical situation. In common and familiar clinical situations has difficulty making sense of data. Needs assistance in diagnosing the main problem and developing/prioritizing appropriate interventions.
<b>“Responding” Did the student feel confident in making decisions during the construction of the concept map? Did the concept map reflect appropriate communication skills, decision making, and judgment/critical thinking skills? Was the student flexible in the development of interventions?</b>	The student assumes responsibility of their clinical decisions. They are confident in making decisions regarding the construction of the concept map. Communicates effectively, explains interventions, and directs peers; utilizes critical thinking skills to fully assess the clinical situation and information. Demonstrates appropriate clinical judgment skills to produce the best interventions and outcomes for the scenario.	Generally communicates well during the exercise. The student effective in directing and helping peers. Accountable for decisions made regarding the clinical situation. May feel “stressed” when the content is complex, difficult, or unfamiliar. Student is less confident during the construction of the concept map. Demonstrates clinical judgment/critical thinking skills, but the decisions that they make are prompted by input from peers or faculty. Develops appropriate interventions, but does not plan possible change treatment/interventions.	Student is timid in the decision making process regarding the clinical situation. They are less effective in their ability to communicate and collaborate with other team members. Interventions are based on obvious information only. The student experiences difficulty justifying clinical decisions and judgment skills. They are reluctant to make adjustments to interventions relating to the clinical situation.	Has difficulty communicating with peers and provides confusing rationales in plans for care. The student is able to focus on only one intervention, which is underdeveloped, vague, and incomplete. The student is unable to identify important information or utilize critical thinking/judgment skills to develop appropriate interventions regarding the clinical situation.
<b>“Reflection” How did the student evaluate their own personal experience with concept mapping to facilitate clinical judgment skills?</b>	Concept map is organized and complete. Analyzes personal decision making skills relating to clinical situation. Reflects and critically evaluates the concept map for successful and appropriate interventions. Identifies strengths and weaknesses concerning the clinical situation and personal judgment skills.	Concept map is easy to read and understand. Student is able to analyze decision making skills, strengths, and weaknesses in clinical judgment with minimal prompting. The student needs minimal assistance in the analysis of data, clinical events and interventions. Found the experience helpful in the development of clinical judgment skills.	Concept map is organized, but was vague and incomplete in some areas. Demonstrates awareness of the strengths and weaknesses of concept map. Is self-protective in evaluating personal choices regarding clinical judgment skills.	Map was difficult to construct and understand; unorganized and confusing. Justifies personal clinical judgment skills and choices without fully evaluating the outcomes. Finds it difficult to see flaws or mistakes in plan of care or interventions. The concept map did not help in the enhancement of clinical judgment skills.

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