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CETL – Capstone Project 2006 – 2007

Purpose:

To Enhance Established Nursing Laboratory Curriculum through Active Learning

Course:

N353 Psychomotor Skills is 1 credit laboratory course that prepares students for application of technical skills for the acute care clinical setting. The curriculum is well established with detailed syllabus as follows.

- Objectives
- Related Reading Expectations
- Vocabulary Lists
- Learning Modules
- Self-Evaluation Worksheets
- Performance Reviews

The course consists of small group (10 students) meetings weekly for 2 hours throughout the semester. Each weekly session consists of reviewing objectives for about 1 hour and then demonstration of a new clinical skill. Both are done by the instructor with input from the students.

There are also scheduled graded computer quizzes. The course is graded in the typical manner of A – F.

Analysis of current or traditional teaching style:

Typical the instructor would lead the group discussion reviewing syllabus objectives, vocabulary list, learning modules, and self-evaluation worksheet for 1 hour. The next hour was demonstrating to the students a new clinical skill as reviewed in first hour.

The students voiced concerns about too much information and what was best to study. Study guides were sent out prior to a computer quiz.

Motivation techniques such involving them in the group discussions and encouraging more practice to learn a new technique were used.

Selection of project:

One class week was selected that allowed review, application, and quiz all in close sequence. Most of the course the material is more divided by weeks. This particular material is all in one week.

Project Objectives:

The objectives are stated to align with current course objectives.

1. Explain the purpose of gastrointestinal intubation and describe what you may see clinically.
2. Draw a simple diagram of nasogastric tube placement in the body. What tests would you do determine if the tube tip is in the right location? What test would be critical prior to administration of enteral feedings and why.
3. Explain what is a PEG tube and how is it different from a nasogastric tube. Why would a PEG tube be used instead?
4. Discuss the specific nursing care for a patient with a nasogastric tube to low suction.
5. Discuss the specific nursing care for a patient with a PEG tube for enteral feedings.

Goal for Capstone Project:

The goal was to increase student motivation through active learning strategies. The course is designed to overlap of theory courses with application of clinical skills in the Nursing Laboratory. Active learning plans included:

1. Students were notified several days prior to class to anticipate group study and then presentations the first hour of the course. They could bring their textbooks but the instructor would provide additional textbooks, too.
2. Students are expected to bring course syllabus to class.
3. Instructor provided active learning materials for students such as large paper, markers, textbooks, and tape.
4. Beginning of the class included expectations for the students which included selection of a topic, dividing into small groups, gathering information about topic, and then presenting to the group.
5. Topics were selected by instructor which was from the course objectives.
6. The instructor was also a resource to the students.
7. The students were given 40 minutes to work together and then present to the group.
8. Application of material learned and reviewed would be done through case study and actual performance in the Nursing Laboratory of new skill learned.

Active Learning topic:

The topic was reviewing the purpose for gastric tubes, the different types of tubes, how and when used, complications, and nursing interventions.

Instructor's Role:

The instructor's role was to coordinate the activity, be present and available for questions, and actually visit each group periodically to ask questions, clarify, and possibly re-direct activity.

There were 5 pairs for this active learning project. It was expected that both students be allowed to present their topic with equipment if necessary. Their peers were expected to ask questions. Instructor asked for questions from the group as well.

Once the presentations were completed, a case study was done guided by the instructor with the students solving the problem.

The remaining hour then was dedicated to the students being in the Nursing Laboratory. Manikins were already set-up with supplies for a skill which was insertion of a nasogastric tube, irrigation of a nasogastric tube, and removal of the tube.

The instructor demonstrated the skill from the course syllabus to the students. The then did a return demonstration to each other in groups with one student performing the skill, one student observing or assisting, and one student reviewing the skill aloud to the others. The students were expected to take turns completing the performance.

Again, the instructor was expected to again be present and available for guidance and questions.

Example of case study:

Case Study:

You are the nurse assigned to care for C.D. an 80 year old male. He is 2 days post-operative after an open cholecystectomy. A laparoscopic cholecystectomy was not done due to large gall bladder stones.

Subjective Data:

Moaning and states "I don't know what is wrong" when asked if is having pain. "I hurt all over" and is unable to use the Pain Scale Rating to obtain further data. C.D. refused clear liquid breakfast and said, I am just not hungry". States he didn't sleep at all during the night and is unable to state what would make him comfortable.

Objective Data:

Night shift nurse reported patient was awake on and off but offered no complaints of pain.

Has ambulated to bathroom with help of one since surgery.

Facial expression appears strained.

Skin warm and moist.

T= 98.8 P=92 regular RR=24 regular but shallow BP 130/88

What other information would you want to assess and why? Group discussion lead by instructor to ensure the following key elements were discussed.

- Check the abdominal dressing.
- Last pain medication given
- Lungs upon auscultation
- Abdomen is round and firm
- Consuming water without problems

- IV therapy
- Presence of bowel sounds
- I&O
- Laboratory values

Outcomes:

Students reported being very satisfied with the class that day and performed better than usual on the quiz.

The study guide was not sent to students in their preparation for the computer quiz.

During the class, the student's work and presentation took approximately 1 hour similar to the amount of time an instructor would have lectured.

The Standard Deviation of my course computer quizzes improved compared to 2 previous semesters.

- Spring Semester 2006 SD was 8.44 for 17 students (traditional method of teaching)
 - Scores in Percentages: Average 84.22, Minimum 70.0, Maximum 93.34
- Fall Semester 2007 SD was 8.57 for 20 students (traditional method of teaching)
 - Scores in Percentages: Average 94, Minimum 76.67, Maximum 100
- Spring 2007 SD was 3.22 for 20 students (**active learning applied**)
 - Scores in Percentages: Average 99, Minimum 96.65, Maximum 100