

Concept-based Curriculum

School Name Forsyth Technical Community College, Winston Salem, NC
Course Name Health-Illness Concepts
Course Format Lecture

Key Results The school's average National Council Licensure Examination (NCLEX) scores increased 10 percentage points after implementation of a concept-based curriculum—from 86% to 96%. State NCLEX scores also increased and averaged one percentage point higher than national scores.

Submitted by
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Course materials
Nursing: A Concept Based Approach to Learning, North Carolina
Concept-based Learning Editorial Board

About the Course

Forsyth Technical Community College is an urban community college serving more than 11,000 credit-earning students, plus more than 31,000 corporate and continuing education students, on eight campuses, including its main campus in Winston Salem.

Seventy-two nursing students per semester take the required, five-credit, Health-Illness Concepts course, which teaches them how to provide safe nursing care as it relates to such topics as infection, stress/coping, health-wellness-illness, care management, and safety and informatics.

The course employs a concept-based curricular approach—an educational method that, “frames factual content and skills with disciplinary concepts, generalizations, and principles. Concept-based curriculum contrasts with the traditional two-dimensional model of topic-based curriculum that focuses on factual content and skills with assumed rather than deliberate attention to the development of conceptual understanding and the transfer of knowledge.”¹

In nursing education this translates to a curriculum built around central concepts—in this course, the individual, healthcare, and nursing—that are taught with an emphasis on the interconnectedness of those concepts throughout a person's life, and are illustrated via clarifying exemplars.

Challenges and Goals

Beginning in spring 2010, nursing instructors across North Carolina were mandated to introduce a concept-based approach to their curricula. Supported by a grant, the move to concept-based learning was motivated by a desire to streamline current content and increase programmatic success rates.

Lead Instructor Sue Ellen Miller and her colleagues chose Pearson to provide concept-based textbooks and technologies specifically designed to be used in a concept-based curriculum. These unique resources better enabled the move away from content over-saturation, and toward the interconnectedness of concepts.

Implementation

Today, Miller groups course content into modules by concept (rather than by body systems or individual courses), and follows a consistent format for content presentation. Students find most information about a topic in one place, and foundational material is presented just once in a particular course then reinforced via in-depth and active learning activities that are built upon in subsequent courses.

For example, Miller shares case studies during lecture. Students then prepare for simulations by completing presimulation activities comprising brief questions related to those same case studies. Similarly, simulation scenarios are related to concepts/exemplars Miller discussed in class that week. Most activities are followed by debriefing sessions, in which students share and further explore their learning. These sessions enable students to recognize patient differences and similarities through the lens of specific content, e.g., nutrition, terminal illness, pain.

¹ Erickson, H. Lynn, “Concept-based Teaching and Learning,” International Baccalaureate (2012), www.ibmidatlantic.org/Concept_Based_Teaching_Learning.pdf.

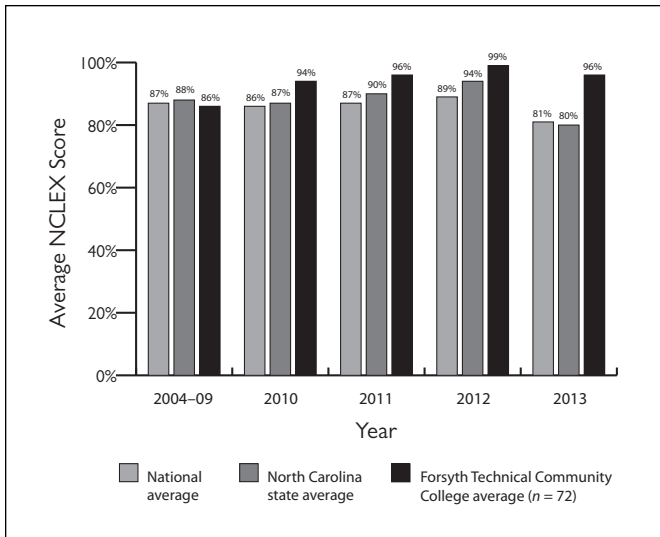


Figure 1. Average National, North Carolina State, and Forsyth Tech ADN NCLEX Scores, 2004–2013

Miller uses group discussions and Tanner’s Clinical Judgement Model to address specific questions and promote clinical reasoning skills. In addition, she promotes the use of games and movies that incorporate nursing skills (e.g., leadership) and class activities that provide real-time application of course concepts.

Miller notes that not all of the previous material is covered in her new, concept-based lectures. She supports this change with the industrywide assessment that nursing education is experiencing content saturation, and the revised notion that the same amount of content not be covered in a given curriculum. Exemplars cover fewer diseases and disorders, and use time gained for active-learning exercises and the development of clinical reasoning skills.

Assessments

- 76 percent Unit exams (four)
- 20 percent Comprehensive final exam
- 2 percent Assignments and participation
- 2 percent Nonproctored Assessment Technologies Institute test average

Results and Data

Many expected average NCLEX scores to decline after implementation of a concept-based curriculum because less content is taught; but this is not the case.

- North Carolina state scores remained fairly steady, showing slightly higher scores than the national average.
- Scores for Forsyth Tech Associates Degree in Nursing (ADN) graduates increased by 10 percentage points: 86% before implementation, and 96% after (figure 1).
- To date, 2014 Forsyth Tech scores average 16 percentage points higher than the national average: 99% versus 83%.

The Student Experience

Miller’s students actively participate, assume responsibility for their learning, integrate concepts, apply information, and demonstrate clinical-reasoning skills. Instead of memorizing thousands of alterations, students gain in-depth knowledge of selected alterations and learn how to apply that knowledge as new challenges and client presentations are offered.

Although course success is ultimately measured by NCLEX scores, Miller reports that other successful student patterns have emerged. Because students are given more review work prior to lecture, there has been an increase in preparedness and engagement in lectures. Miller also notices improvements in critical thinking from the curriculum’s new, interactive, clinical-judgment activities.

Conclusion

The process of implementing a concept-based curriculum required that Miller and her colleagues rethink how they teach in the classroom. Miller warns that for this curriculum format to be successful, instructors must embrace the change, and recognize that additional content may not be added. Faculty must agree that bringing additional content to the curriculum is unacceptable, and that for the good of the program, areas of personal specialty may not be included or covered.

Miller further advises that instructors moving to a concept-based curriculum prepare for how to teach this way and how to evaluate students by participating in workshops that share strategies for success with the format.