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Flipping the classroom to teach population health: Increasing the relevance

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ABSTRACT

In recent years, there have been multiple calls to enhance the population health and health promotion aspects of nursing programs. Further impetus has been provided by passage of the Affordable Care Act in 2010 with its focus on prevention. The need to develop students who can critically think and apply knowledge learned is crucial to the development of nurses who can integrate and apply the concepts of population-focused practice in society and a healthcare system undergoing transformation. This coupled with the ever changing needs of learners requires a different approach to content delivery and presentation. Flipped classroom courses, with an online component, offer the flexibility and technology desired by current undergraduate students. The use of a flipped classroom approach to re-design a population health course in a Midwestern nursing program resulted in stronger course evaluations from students and reflected better student understanding of the relevance of such content in a nursing curriculum.

Introduction

Nursing students have traditionally focused more strongly on acute care and medical-surgical nursing courses, often perceiving content related to population health or public health as not exceedingly relevant to their nursing education. This perception is in direct conflict with the need for all college undergraduates, including nursing students, to receive education concerning public health and to support the ability to understand and effectively address public health challenges (Institute of Medicine, 2003). This was supported in 2010 by the Institute of Medicine (IOM) report on the Future of Nursing which called for nursing programs to prepare more nurses for positions in non-acute care community based settings. In their supplement to the Baccalaureate Essentials, the American Association of Colleges of Nursing (AACN) also advocated the need for nurses to "… engage in community and population assessment, health promotion, and interdisciplinary efforts to improve health …" (2013, p. 7).

Others have echoed this call as well, reinforcing the need for a shift in focus from illness care to health promotion (Schofield et al., 2011; Mooney et al., 2011) and from individual to social and cultural (McAllister, 2010). According to Sistrom et al. (2011), failure to change public health curriculums to better address population health needs makes it difficult to achieve improvements in population health. In addition, Frenk et al. (2010) discuss the need to redesign professional health education using "novel forms of learning that transcend the confines of the classroom" in an effort to prepare health professionals who can synthesize knowledge needed to function in an increasingly globally interdependent world (p. 1926). In response to these reports, educational programs which prepare healthcare professionals, including nursing, have been adding or restructuring courses to better enhance the ability of students to utilize population health concepts in practice (Riegelman, 2008).

Background

Basis for change

While undertaking a curriculum revision, one Midwestern university four-year baccalaureate nursing program decided to address this call to action by restructuring the delivery of content related to population health. In the curriculum under revision, these concepts were taught in a third-year (junior-level) public health science course which was taken alongside medical-surgical,

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psychiatric, and obstetrical nursing courses, all of which included clinical hours in acute care settings. This course provided support for a fourth-year (senior-level) public health nursing course which included didactic and clinical components. The third-year public health science course was completed in a traditional lecture format and only utilized exams and one paper to evaluate learning. Students consistently complained about the lack of relevance of this course to nursing in general. Student comments included; "I have trouble seeing the big picture and how this fits into the nursing curriculum"; "… the content was definitely interesting, but there were some parts of it that I felt were very Public Health related, but not so much nursing related …", and "The material does not seem to be completely relevant to nursing …". Students also commented frequently about the design of the course, suggesting on course evaluations that faculty should find ways to "involve the students to make the class more interesting" so that students would be engaged in the material and understand the relevance to nursing. Faculty also perceived the frustration and lack of interest on the part of students. While faculty were rated strongly by students, the course generally rated between a 3.7 and 3.9 on a 5.0 point Likert scale (1 = Very poor; 5 = Excellent).

Student comments, course ratings and feedback from faculty who taught the fourth-year public health nursing course which built upon the existing third-year public health science course also indicated that the content was not seen as relevant. In addition, students did not appear to retain the content taught the previous year. These issues further supported the need to utilize curriculum revision to make changes in an effort to increase student understanding and application of population health principles in their approach to nursing practice. The purpose of this study is to discuss the rationale for course revision, describe the flipped classroom design, and to provide preliminary evaluation of this revised course.

Curriculum revision

Based upon course evaluations and student feedback, faculty decided to address the changing roles of registered nurses and the need for a better understanding of population health concepts. As previously noted, in the curriculum under revision, students received public health content in a third-year public health science course which provided support for a fourth-year public health nursing course. As an aspect of curriculum revision, faculty made the decision to move the public health science content to the second-year (sophomore level) with a new name and approach. The course was renamed population health; while the content was similar, the approach was from a population health perspective. The movement back to the second year was based on the hope that provision of the content earlier in the curriculum would allow the students' time to apply the concepts as they began their foundational nursing courses and prior to the strong emphasis on acute care nursing in the third year of the curriculum.

Support for redesign

During the time the school was revising the curriculum, a university-wide initiative to better address the needs of learners was also underway. Faculty responsible for teaching the course were selected as fellows in this university-wide program which focused on course redesign to foster student-centered and active learning strategies. This university initiative offered funding and faculty support for innovative course redesign. Support provided included information technology, library science, and educational and instructional guidance through the university's Center for Instructional Excellence. Faculty attended workshops and worked with a support team to determine the best approach for each specific course. After participating in this process, the decision was made to offer the new population health course as a flipped classroom course design to meet the different learning styles and preferences of today's students (Johnson and Romanello, 2005) using a mix of online and in-class learning with a variety of active learning strategies.

The learning styles of current undergraduate students require a change in teaching approach and strategies. These students, born since 1982, are often referred to as 'millennials' and as the 'net' generation, with a preference for group projects, immediate feedback, and learning in their own time frame (Strauss and Howe, 2003; Johnson and Romanello, 2005; Mangold, 2007; Pusawiro, 2012). These students prefer innovative learning environments that are interactive and engaging, allowing them to learn through discovery (McCurry and Martins, 2010). A supportive learning environment which includes personal encouragement and feedback from teachers with an emphasis on self-motivation and responsibility is highly valued (Howe and Strauss, 2000; Conklin, 2012; Mangold, 2007). Additionally, they enjoy learning from friends and teaching friends as they have done since childhood within the context of multiple social media platforms (Bristol, 2014; Pusawiro, 2012).

Throughout the course re-design process, faculty utilized Chickering and Gamson's (1987) principles for undergraduate education which included the use of active learning strategies, emphasized contact between faculty and students, encouraged prompt feedback and cooperation between students, and respect for different learning styles and diverse student talents among others. Flipped classroom designs address many of these principles and the characteristics of millennial learners. These designs allow for a student centered focus; increasing students responsibility for their own learning (McLaughlin et al., 2014). The emphasis on active learning strategies includes increased engagement in learning and provides greater opportunities for "peer sharing" (Boyer, 2013, p. 28). Flipped designs allow faculty to spend the time they have with students "facilitating higher order application of knowledge" in place of lectures with power points which engage learners minimally (Mehta et al., 2013 p. 1421). This enhances student understanding of the relationship between concepts, helping them to create meaning, encouraging critical thinking (Hughes, 2012) and ultimately leading to nurses who will be able to function more effectively in a rapidly changing healthcare system (Allen, 2013; Prober and Khan, 2013).

Flipped classroom design

This flipped classroom design involved 'flipping the classroom; ' material that was traditionally provided in a lecture format was moved to an online format and in-class time became open for the use of active learning strategies. Multiple teaching strategies were used to impart this online content including voice over power points, teaching videos, interactive online modules, and text readings. This flipped classroom design allowed students some flexibility during the learning process while also increasing responsibility for learning and allowing for face-to-face interactions with faculty.

Students attended class every two weeks with assessment of the outside-of-class assignments occurring via online quizzes which had to be completed prior to the start of class. This assessment strategy was done to ensure that students had completed the preparatory work deemed necessary to actively participate in the in-class activities. In-class time was dedicated to active learning and took place in a classroom specifically designed for active learning. This newly redesigned university space included small