# OUTCOMES OF AN UPPER DIVISION PREPARATION COURSE ON STUDENT SUCCESS RATES IN AN URBAN/RURAL BSN PARTNERSHIP PROGRAM

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**Abstract**

Increased attrition in an urban/rural Bachelor of Science in nursing (BSN) partnership program created uncertainty in the program's future. With a mission to increase the number of BSN-prepared Registered Nurses (RNs) in the region, and with a documented shortage, it is critical to address attrition and support students working toward academic success. In an effort to decrease attrition, an Upper Division (UD) preparation course was offered to second-semester sophomores enrolled at the University of South Carolina (USC) Salkehatchie who had been accepted to the UD of the BSN program. Academic and survey data indicated that although student success rates did not improve, students transitioned to UD with increased confidence, and those who completed the first semester of UD remain eligible for program progression.

**Keywords:** Nursing student preparation, academic support, nursing partnership, nursing student attrition, and academic success

## Introduction

As the nursing shortage continues to grow, schools of nursing across South Carolina and the nation are called upon to expand their programs and graduate more nurses to care

for an aging population in need of high-quality healthcare (Harris, Rosenburg, & O'Rourke, 2014). In an effort to increase the number of baccalaureate-prepared Registered Nurses (RNs) in rural southeast SC, the University of South Carolina (USC) Salkehatchie Rural Nursing Initiative was created through a partnership with the USC Columbia College of Nursing. The mission of the program is to "grow our own nurses" by offering those residing in the rural five-county Salkehatchie region an opportunity to earn a Bachelor of Science in Nursing (BSN) degree locally, and by encouraging graduates to remain in the region to work, therefore increasing the number of students who have attained a BSN in the region (USC Salkehatchie, 2015). On average, program attrition rates have been approximately 25% per year, yet a sudden 136% increase in attrition in 2018 necessitated an intervention to prepare students prior to progression to the Upper Division (UD) of the rigorous nursing program. This article will describe the conditions that gave rise to the UD preparation course, outline the varied concerns related to retention of nursing students, and provide an overview and analysis of the intervention that was developed.

## Scope & Significance of the Problem

Between 2010 and 2016, an average of twelve students graduated from the BSN partnership program annually, equating to an attrition rate of approximately 25%. Six students graduated in 2017 and three graduated in 2018, which constitutes an average attrition rate of 59% (Cone & Williams, 2018). This large attrition rate is concerning, because it impacts the number of BSN-prepared RNs in the region (see Table 1).

*Table 1. Nursing Student Attrition*

| Class of: | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|---|---|---|---|
| Admitted | 16 | 16 | 16 | 16 | 14 | 16 | 16 | 16 | 7 |
| Graduated | 14 | 8 | 12 | 16 | 12 | 12 | 10 | 6 | 3 |
| Attrition | 22% | 50% | 25% | 0% | 14% | 25% | 37% | 62% | 57% |

The increasing attrition is significant because the Institute of Medicine's Future of Nursing Report (2010) stresses the need for a more highly qualified nursing workforce to contribute to the safety and quality of the health care system. To help address this need, the Institute of Medicine (2010) recommends increasing the proportion of nurses who hold a BSN degree to 80% by 2020. To facilitate this increase, nursing programs must create partnerships that expand BSN opportunities, and furthermore they must implement

evidence-based pedagogical approaches that support students as they work toward their goal of becoming an RN.

Attrition in nursing programs creates financial, educational, and workforce challenges for students and educational and healthcare organizations (Kubec, 2017). At the local level, a lack of new BSN graduates forces healthcare organizations to employ expensive contract RNs, or to resort to an even more serious issue of encouraging staff to work overtime. These alternatives cause significant deficits in quality of care, are detrimental to an organization's budget, and negatively impact the welfare, job satisfaction, and stress level of the organization's RNs, leading to burnout and high staff turnover (Schlairet, 2017).

A 2017 study by the U.S. Department of Health and Human Services projects a nursing shortage of 16.6% and ranks SC the state with the fourth highest projected shortage in the nation. Further, qualified nurses are unevenly distributed, resulting in a more profound shortage in rural areas (Rural Health Information Hub, 2017). Approximately 34% of SC residents live in rural areas (SC Revenue and Fiscal Affairs Office, n.d.), yet RNs working in rural areas make up only 16% of the statewide RN workforce (Rural Health Information Hub, 2017). Those residing in rural communities are at an increased risk for chronic health problems and experience health disparities that can only be addressed with an adequate level of highly qualified healthcare providers (Rural Health Information Hub, 2017). And because students who complete a nursing program in a rural community are more likely to practice in that community upon graduation, focus must be placed on preparing rural students for the academic rigor of a BSN program to promote success (Rural Health Information Hub, 2018).

## Synthesis of the Literature

To address the important student attrition increase, USC Salkehatchie instituted a UD preparation course based on best practices from nursing education and student success literature. The theory underpinning this course and its design will be described here, after which the results will be analyzed.

Nursing student attrition is a multifaceted issue that requires a focused, student-centered approach. Studies conducted by Bigbee and Mixon (2013) and Jeffreys (2015) describe the multiple and complex reasons for attrition, which include academic factors

(study, organizational, and time management skills), environmental factors (financial status, financial and emotional support, employment responsibilities, and child care and living arrangements), and student affective factors (attitude, values, and beliefs). Understanding these factors provides a more in-depth foundation for establishing effective ways to combat student attrition. Fontaine (2014), Gilmore and Lyons (2012), Hadenfeldt (2012), Harding (2012), and Harris, Rosenburg, and O'Rourke (2014) have evaluated the use of intervention programs and pre-semester workshops and have concluded that they demonstrate an increase nursing student retention. Common modules and themes in intervention programs include test-taking strategies, stress management, critical thinking, time management, and study skills. Further, Jacobs (2016) concluded that students who participated in workshops that facilitated connections with faculty and the institution felt more confident in their ability to be successful. Similarly, Tantillo, Marconi, Rineout, Anson, and Reifenstein (2017) concluded that a combination of academic and social support are influential factors affecting student satisfaction and success.

Orientation programs and supplemental courses focusing on increasing student confidence and self-regulatory patterns have positive results for nursing programs working to decrease attrition rates (Fontaine, 2014; Gilmore & Lyons, 2012; Harris, Rosenburg, & O'Rourke, 2014; Jacobs, 2016; Kinney, Montegut, Charlton, & McManus, 2017; Mooring, 2016; Walker, 2016). The most effective programs and courses have focused on supporting the specific needs of the student population and have utilized a collaborative approach. Student characteristics cannot be overlooked. Financial aspects and other characteristics and stressors have a significant effect on students' decision to remain enrolled and on their academic eligibility to progress (Harris, Rosenburg, & O'Rrourke, 2014; Jeffreys, 2015; Shelton, 2012; Wray, Barrett, Aspland, & Gardiner, 2012).

Nursing student attrition has a variety of causes. Marianne Jeffreys's (2015) Nursing Universal Retention and Success (NURS) Model is a guide to uncovering those factors and to providing an all-encompassing approach to optimizing student outcomes. Every nursing student encounters factors that interfere with their ability to be successful. Jeffreys (2015) suggests that student academic outcomes are based on multiple factors, including 1) student profile characteristics, 2) student affect, 3) academic and psychological outcomes, and 4) professional integration. Jeffreys's NURS model is relevant to a wide variety of

students and nursing programs, including distance education programs such as the BSN partnership program. In order to facilitate student success in a rigorous nursing program, faculty must develop strategies that are tailored to the program and individual student (Jeffreys, 2015). A comprehensive success program should incorporate each of the factors incorporated in Jeffreys's NURS model.

### Description and Design of Project Intervention

**Description.** The USC College of Nursing admits 16 students annually to the BSN program at USC's regional campus at Salkehatchie. This program provides students the opportunity to earn a BSN degree while remaining on the Salkehatchie campus for all four years of the program. As one of the two USC nursing partnership program distance campuses in rural SC, USC Salkehatchie students participate in USC Columbia courses via multiple distance education methodologies. To enhance the students' level of preparation as they progress to the UD, a six- week UD preparation course was created and offered for voluntary enrollment during the second half of the spring 2018 semester. Students earned a pass/fail grade for the course. Fourteen of the fifteen sophomore nursing students accepted to the UD of USC CON's program enrolled in the course. The expected outcome of the course was enhanced student success rates, specifically in the students' first semester of UD. Project results include data on thirteen of the fourteen students who participated in the UD preparation course.

**Design.** Development of the UD preparation course was completed with historical program data in mind. Conversations with students influenced course design. The newly designed course was delivered using Blackboard, a virtual learning environment and course management system, and delivered foundational material for success as a UD distance education student. Course faculty met with students weekly for one hour, utilizing a variety of learning methods. The course focused on developing test taking skills, study strategies, time management, and anxiety reduction. The course introduced students to a variety of subjects and technologies used throughout UD including nursing math, expectations for professionalism and communication, a review of content from lower division nursing courses (particularly biophysical pathology topics), American Psychological Association (APA) formatting, Blackboard navigation, and instruction in

Adobe Connect (the platform used for distance delivery of UD didactic courses). In Blackboard, the course was organized into various tabs.

- *Announcements.* The announcements tab contained new and important course information and weekly course requirements.

- *Faculty information.* The faculty information tab provided students with the faculty's contact information, an introductory message, and the faculty's biography.

- *Syllabus/online learning.* The syllabus/online learning tab contained a "How to Succeed in NURS 399" document outlining general course information, instructions for getting started, a description of the organization of course content, login requirements and estimated study time, a recommended study routine, a list of assignments, and requirements for the discussion board. Required and recommended course textbooks were posted in this tab, as well as a folder containing helpful information regarding Blackboard and technology support resources.

- *Weekly course guides.* The weekly course guides tab was broken down into six weekly folders. Each folder contained topics, learning objectives, and learning activities for the appropriate week. Reading assignments, lecture recordings, assignment submission links, and links to surveys, assessments, and other resources pertinent to the week's objectives and activities were also posted in this tab.

- *Study resources.* The study resources tab contained a pharmacology class preparation suggestions document, a fluid and electrolytes review recording, a lab values sheet, information about APA formatting, and available student success resources.

- *Class discussion board.* The class discussion board tab was a forum in which students could post questions related to the course. Threads were created in the class discussion board, which included general course questions and an individual thread for each week of the course.

## Implementation Timeline

The UD preparation course was created during the summer and fall 2017 semesters. Course content was developed based on years of experience with UD students, conversations with previous and current UD students, a survey completed by students regarding items they felt would have been helpful prior to progressing to UD, as well as a current pedagogical literature review. The course was launched in March and concluded in late April 2018. Project data collection, compilation, and analysis spanned from the spring 2018 semester through the spring 2019 semester.

## Data Collection and Analysis

Three surveys measured this quality improvement project: a demographic and characteristic survey provided quantitative, descriptive data for course participants, and two Likert-scale and narrative response surveys provided qualitative data regarding students' perceptions of the UD preparation course. Results from each survey were analyzed to determine the effects of this course on student attrition.

At the start of the course, an anonymous survey was administered collecting self-reported demographic and characteristic data. At the conclusion of the course, qualitative data was collected via an anonymous course evaluation survey containing eight Likert scale and four open-ended questions to gather students' feedback about the course, as well as any suggestions for future consideration.

Course participants were followed throughout the fall 2018 semester assessing for academic success and therefore progression to the spring semester of their junior year. Based on the USC College of Nursing (2017) policy, successful course completion, and therefore progression to the subsequent semester, is defined as earning a grade of C or better in each UD course. Any student earning a below C grade in a nursing course is required to repeat the course and earn a grade of C or better to remain eligible for program progression (USC CON, 2017). Any student earning more than one grade below a C in nursing courses is deemed ineligible to continue in the program and must change majors (USC CON, 2017). With this policy as a guide, academic success data was collected for each student at the completion of the fall 2018 semester utilizing student self-reported data via surveys and the USC student information system.

Participants were asked to again complete the demographic and characteristic data survey along with a modified course evaluation survey for comparison after final course grades were posted for the fall 2018 semester. Three multiple choice questions were added to create the modified course evaluation survey identifying if the student withdrew from any nursing courses, earned any below C grades, and if applicable, the number of below C grades earned. The remaining survey questions were adjusted to allow students to reflect on the effectiveness of the preparation course based on their experiences after completing one semester of UD. This survey was administered, and data collected via the password protected Blackboard system. The post fall 2018 survey asked students to provide responses based upon a reflection of how the UD preparation course helped or hindered their success during their first semester of UD.

## Results

**Quantitative Results**

**Demographic and characteristic data.** All students completed the initial demographic and characteristic survey, and eleven of the fourteen participants completed the survey at the conclusion of the fall 2018 semester (see Table 2). Although three students chose not to participate in the post fall 2018 survey, the pre and post results were fairly consistent. All participants were females. The majority were between 18-24 years of age (72% and 64% respectively), though some participants were from 25-30 years of age (14% and 18%), and others were 36-40 years of age (14% and 18%). The majority were white, non-Hispanic, single, employed, and pursuing their first bachelor's degree. Forty-five percent of the participants who completed the post fall 2018 survey reported earning a C or better in NURS courses, resulting in the ability to progress to the subsequent semester. Prior to the start of UD preparation course, 93% of the students were employed, the majority of whom worked 11-20 or 21-30 hours per week (57% and 22% respectively). Of those who participated in the post fall 2018 survey, the percentage of students working decreased by 20%. Of the participants who remained employed, the number of hours students who worked 11-20 hours a week decreased to 36% and those who worked 21-30 hours per week decreased to 18%. This finding indicates that at the conclusion of the UD preparation course, students better understood the time-commitment required during UD and therefore found a way to either eliminate the need to work and/or decrease the

number of hours worked. Larger trends in student success research indicate that students working more than sixteen hours per week are at an increased risk for attrition and negative academic outcomes (Kubec, 2017). For this reason, students are highly encouraged not to work during UD due to the rigorous nature of the program and significant time commitment. This research demonstrates that many students do not have that luxury and must work to support themselves and/or their families. Unfortunately, more often than not, employment and family obligations significantly interfere with students' ability to commit adequate time to their academic studies.

*Table 2. Demographics & Characteristics*

| | Pre F18 | Post F18 | | Pre F18 | Post F18 |
|---|---|---|---|---|---|
| | N=14 | N=11 | | N=14 | N=11 |
| Gender | | | Race | | |
| Male | 0 (0%) | 0 (0%) | Black/AA | 3 (22%) | 2 (18%) |
| Female | 14 (100%) | 11 (100%) | White | 11 (78%) | 9 (82%) |
| Age | | | Ethnicity | | |
| 18-24 | 10 (72%) | 7 (64%) | Hispanic/Latino | 2 (14%) | 2 (18%) |
| 25-30 | 2 (14%) | 2 (18%) | Not Hispanic/Latino | 12 (86%) | 9 (82%) |
| 36-40 | 2 (14%) | 2 (18%) | | | |
| 1st Gen. College | | | Marital Status | | |
| Yes | 5 (36%) | 6 (54%) | Single | 10 (72%) | 8 (73%) |
| No | 7 (50%) | 5 (36%) | Married | 3 (22%) | 2 (18%) |
| Unsure | 2 (14%) | 0 (%) | Divorced/Separated | 1 (7%) | 1 (9%) |
| Children in the Home | | | BSN – 1st Bachelor's Degree | | |
| Yes | 5 (36%) | 4 (36%) | Yes | 12 (86%) | 10 (91%) |
| No | 8 (57%) | 7 (64%) | No | 1 (7%) | 1 (9%) |
| Unanswered | 1 (7%) | 0 (0%) | Unsure | 1 (7%) | 0 (0%) |
| Employed | | | Residing County | | |
| Yes | 13 (93%) | 8 (73%) | Allendale | 2 (14%) | 0 (0%) |
| No | 1 (7%) | 3 (27%) | Barnwell | 2 (14%) | 2 (18%) |
| Hours Worked/Wk | | | Colleton | 7 (50%) | 6 (54%) |
| 1-10 | 1 (7%) | 1 (9%) | Dorchester | 1 (7%) | 1 (9%) |
| 11-20 | 8 (57%) | 4 (36%) | Hampton | 2 (14%) | 2 (18%) |
| 21-30 | 3 (22%) | 2 (18%) | | | |
| 31-40 | 1 (7%) | 1 (9%) | Pathophysiology Grade | | |
| N/A | 1 (7%) | 3 (27%) | B | 6 (43%) | 4 (36%) |

| A&P I/II Grade | | | C+ | 4 (29%) | 2 (18%) |
|---|---|---|---|---|---|
| A | 10 (72%) | 9 (82%) | C | 3 (22%) | 4 (36%) |
|  | 10 (72%) | 7 (64%) |  |  |  |
| B+ | 2 (14%) | 0 (0%) | No answer | 1 (7%) | 1 (9%) |
|  | 3 (22%) | 0 (0%) |  |  |  |
| B | 1 (7%) | 1 (9%) | Microbiology Grade | | |
|  | 1 (7%) | 1 (9%) |  |  |  |
| C | 1 (7%) | 0 (0%) | A | 3 (22%) | 1 (9%) |
|  | 0 (0%) | 0 (0%) |  |  |  |
| No answer | 0 (0%) | 1 (9%) | B+ | 5 (36%) | 3 (27%) |
|  | 0 (0%) | 3 (27%) |  |  |  |
| Chemistry Grade | | | B | 3 (22%) | 4 (36%) |
| A | 6 (43%) | 3 (27%) | C+ | 1 (7%) | 1 (9%) |
| B+ | 4 (29%) | 3 (27%) | C | 2 (14%) | 1 (9%) |
| B | 1 (7%) | 2 (18%) | No answer | 0 (0%) | 2 (18%) |
| C+ | 1 (7%) | 1 (9%) | Fall 2018 Outcomes | | |
| C | 2 (14%) | 1 (9%) | Earned >C in all NURS courses | N/A | 5 (45%) |
| No answer | 0 (0%) | 1 (9%) | Did not earn >C in all NURS courses | N/A | 6 (55%) |

**Academic outcomes.** Academic data for each participant was accessed using electronic records from SSC. Academic outcomes of the 13 UD preparation course participants enrolled in the fall 2018 semester were as follows:

- Five students (39%) successfully progressed to the subsequent semester and remain on track for timely graduation.
- Two students (15%) withdrew from all nursing courses within the first few weeks of the semester and changed their major.
- Two students (15%) withdrew from one nursing course, failed one nursing course, and passed the remainder of their courses. These students remain eligible for program progression, yet as a result of the course failure and withdrawal, they must retake both courses (withdrawn and failed) in fall 2019. Should these students fail an additional nursing course, they will no longer be eligible for program progression per USC College of Nursing policy. Due to the withdrawal and failure, these students' graduation will be delayed by one year.
- One student (8%) withdrew from a course, yet passed the remainder of the courses. This student remains eligible for program progression, yet as a result of

the withdrawal, must retake the course in fall 2019. This student's graduation will be delayed by one year.

- Three students (23%) failed one course, yet passed the remainder of their courses. These students remain eligible for program progression, yet as a result of the course failure, they must retake the course in fall 2019. Should these students fail an additional nursing course, they will no longer be eligible for program progression per USC College of Nursing policy. These students' graduation will be delayed by one year.

Thirty-nine percent of participants were on-track, and although two students withdrew from all courses and changed their major, 100% of the continuing students remain eligible for program continuance. Historically, the program has lost an average of three students during the first semester of UD due to multiple course failures (below C grades), resulting in the inability to progress in the nursing major (per College of Nursing policy). Ultimately, although overall success rates did not improve, this is a significant finding and notably positive project result.

**Qualitative Results**

Eleven students participated in both the pre and post fall 2018 surveys that included Likert scale and open-ended questions to reveal their thoughts, feelings, and suggestions regarding course offerings and activities. Survey participants provided extensive, detailed, thoughtful, and helpful responses to the open-ended questions, and analysis of responses uncovered suggestions useful for potential future course and/or program adjustments.

**Pre-assessment results (see figure 1).** The initial survey revealed that only one of the eleven responding students reported a negative experience and did not feel more prepared to transition to the UD. This student additionally noted they would not recommend this course to future students. The remaining ten respondents reported that the course was extremely helpful in preparing them for progression to the UD. According to respondents, the most beneficial portions of the course were the following:

- UD student panel – A panel of students currently enrolled in UD addressed incoming student questions. Panelists shared from their personal experiences

and offered suggestions to incoming students. Attendees had the opportunity to ask questions and gain a better understanding of UD from the student perspective.

- NCLEX-style questions – Students were required to purchase *Test Success: Test-Taking Techniques* by Nugent and Vitale which includes NCLEX-style practice questions and rationales. Throughout the course, sections of NCLEX-style questions were assigned, and students were encouraged to read rationales provided for correct answers. These assignments were not graded for accuracy, only for completion.

- Math modules – Historically, upon progression to UD, each student is enrolled in a math course in Blackboard containing instructional videos and practice tests, yet the UD preparation course participants were enrolled in the Blackboard course prior to UD progression. Assigned modules were followed by completion of the corresponding practice tests.

When asked which topics were least helpful, respondents reported that all aspects of the course were helpful and should remain as a part of any future course offerings. Respondents also reported that the six-week format was sufficient for the material covered throughout the course.

**Post-assessment results (see figure 1).** Likert scale results were comparable to the pre-assessment survey Likert scale results. The greatest variance was in the helpfulness of the Learning and Study Strategies Inventory (LASSI), the test anxiety lesson, and strength/weakness surveys completed at the beginning and end of the course. Initially, all respondents reported they were helpful, whereas 27% reported that these elements were not helpful when reflecting back on the course. Overall, students reported that they felt the course was helpful in their preparation to begin and progress through UD. The majority of students (92%) reported the course was worth their time and money and was helpful in their progression to and through their first semester of UD (whether remaining on track or not). As in the pre-assessment, the UD student panel, NCLEX-style questions, and math modules were reported as the most beneficial portions of the course.

*Figure 1. Course Evaluation Survey Results, Pre & Post Fall 2018 (N=11)*
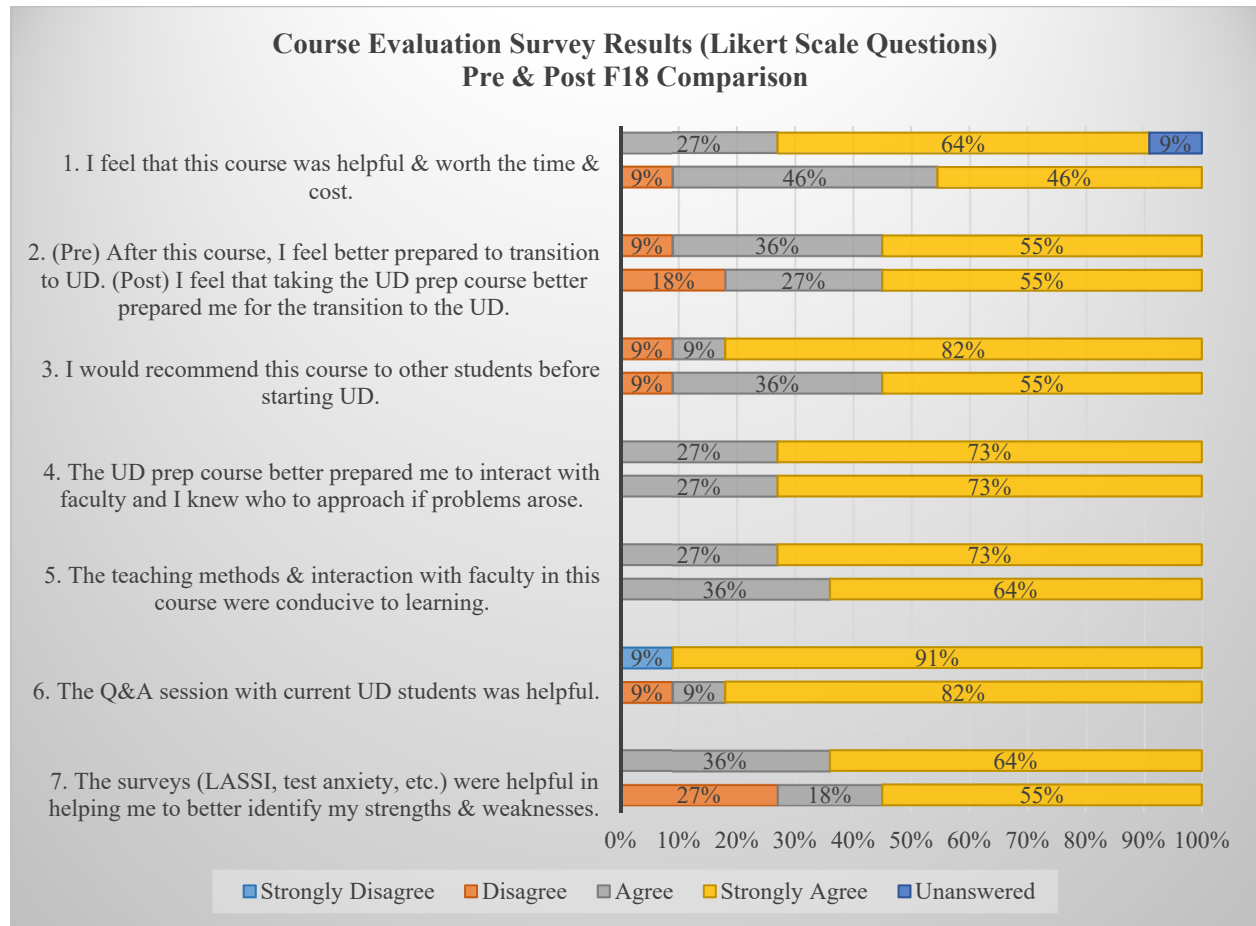


*Note: Pre-test results = top bar; Post-test results = bottom bar.*

## Discussion and Recommendations

The preparation course alone was not effective in enhancing student success outcomes. Student success literature demonstrates the necessity of a multi-pronged approach including a combination of preparation courses, formal tutoring programs, peer mentoring programs, individual success plans, and strategic recruitment strategies to ensure a strong pipeline of qualified students (Bigbee & Mixon, 2013; Fontaine, 2014; Merkley, 2016; Tantillo, et al., 2017). Proactive, personal, and student-centered support programs encourage prompt identification of at-risk students, allowing for early intervention. This project focused solely on the development and assessment of a UD preparation course, yet results indicate the need for comprehensive programing.

Due to the convenient nature of the sample and the small sample size, it is important to note that the study may not be reflective of all nursing students. Replication of this

project with a larger population of nursing students is recommended to gain additional insight into results of course implementation.

## Conclusion

Student attrition has a high cost not only to the institution, but also to the student, community, and government (Ascend Learning, 2012). Students who do not complete their degree incur a high cost for their studies. Implementation of and investment in a quality student retention program enhances student success and will provide a positive return on investment, both financially and in response to the nursing shortage. It is imperative that undergraduate nurse educators create opportunities and provide evidence-based pedagogical approaches that enhance students' educational and clinical experiences, which help to improve their chances of success. Nursing student success requires a collaborative and team-based approach, and although heavily impacted by student characteristics, nursing programs have a unique opportunity to implement evidence-based approaches to help students overcome barriers to success.

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