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Transitioning an On-Campus Graduate Nursing Program to a Distance Learning Environment: Do Online Students Perform as Well?

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ABSTRACT

This study examined the academic success rates of online graduate nursing students by comparing them to the on-campus cohort of students prior to the program transitioning online. Analysis was conducted by identifying and comparing final course grades in four required MSN courses. Data was extracted from the university's BANNER system. Results reveal that both cohorts of course delivery modes yield academically successful MSN students. The study also shows that online students are performing almost nearly as well as the on-campus students in the program once did. Each course is different and yielded different results, but it can be concluded that both course delivery modes are providing the MSN program with almost equal and stellar pass rates by the students taking their required core courses.

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CHAPTER 1

INTRODUCTION

This study will evaluate trends related to student success at an institution of higher education as it relates to the Master of Science in Nursing program transitioning from an on-campus program to an online program. The author will compare the final grades of graduate level nursing students enrolled in a Master of Science in Nursing program at a rural, regional, public university. The comparison will consist of three years of final course data from on-campus students prior to the MSN program going online and three years of final course data from online students during the first three years that the program was placed 100% online. Students in this program consist of both on-campus and online students and the study will be performed over the time period of six years ranging from Spring 2010 through Fall 2015. The final grades will be extracted from the four core nursing courses that all MSN nursing students are required to take. The four courses include: NSC 840: Nursing Theory, NSC 842: Advanced Practice Nursing Issues, NSC 890: Research in Rural Nursing, and NSC 892: Research Project.

As internet access increases, colleges and universities are using the World Wide Web to add the option of providing distance learning to college students. Unlike the traditional classroom setting, students are increasingly enrolled in a one-hundred percent online course that does not require them to be present on-campus. There are multiple advantages to offering the option of online courses and online degree programs to college students.

According to Dutton, Dutton, & Perry (2001), online courses make the university more available to non-traditional students who want to go to back to college and reinvest their time to earn a college degree. Additionally, they provide the much needed flexibility that students with families and full time employment often seek to control their academic studies at their own time and pace. Alternatively, the lack of face-to-face lectures removes the structure that college students many need to remain motivated and disciplined to complete their assignments and, ultimately, the course. This can often lead to higher drop-out and withdrawal rates from online courses (Dutton, Dutton, & Perry, 2001).

To address the disadvantages of online learning, Woodard Leners, D, Wilson, & Sitzman, (2007), suggest that the higher education community needs to continue to explore ways technology can enhance the teaching/learning process. In doing so, the shift to online learning and the sustainability of creating a positively evolving online course delivery system should include policies and processes addressing the ongoing needs and expectations of online students to ensure their academic success.

Although the use of online learning meets the educational needs of nurses who seek to advance themselves academically and professionally, graduate nursing students beginning their graduate education often lack technological preparedness when beginning the journey in a virtual e-learning environment (Carruth, Broussad, Waldmeier, Gauthier, & Mixon, 2010). For this reason, students face certain technological obstacles they must overcome to achieve a successful outcome when placed in an online learning setting. Carruth, etal, (2010), discovered that poor or inefficient technological skills can cause frustration, resulting in a decrease in motivation for students.

Faculty observations through graduate nursing programs view incoming online students as often lacking essential, basic academic competencies, such as writing and research knowledge (Posey & Pintz, 2014). Additionally, to succeed in online studies, many students need additional assistance in digital literacy and basic study skills, as well as instruction about how to learn with technology.

Purpose of the Study

As the need for advanced nurse professionals increases, more graduate level nursing programs are transitioning to an online format to meet the needs and expectations of students. According to Holtslander, Racine, Furniss, Burles, & Turner (2012), the United States will face a shortage of at least 760,000 nurses. They add that the widespread shortage of nurses around the world means that more nurses need to be educated and that those nurses currently practicing need to be retained while receiving ongoing education and training. To address this, nursing schools need to become flexible and attractive while ensuring that the quality of their program and graduates are maintained. In doing so, effective program evaluation needs to be conducted on an ongoing basis to consider the quality of the program. Additionally, they need to know to what extent are schools of nursing systematically evaluating their programs, what evaluation tools are being used, what are the findings, and how is the evaluation data being used (Horne & Sandmann, 2012). Program evaluation is a component of every major program planning theory or framework in adult education (Cafarella, 2002; Cervero & Wilson, 2006; Forester, 1989; Tyler, 1949). This should be no different once academic programs transition into an online setting.

Although this study does not focus on overall program evaluation of the graduate nursing program identified in the study, it does evaluate the final course grades in four of the core required courses for the three years before the program went online and then compares the grades to the same courses, for three years, after it was offered online. This is considered an element of program evaluation, however, it does not include all facets of program evaluation as it relates to this specific graduate nursing program.

The purpose of only evaluating and comparing final course grades is to identify whether or not the online graduate nursing students' grades are improving, declining, or being maintained as compared to when the program was only offered on-campus. The evaluation of this data will be used to determine if the quality of the four required courses in the MSN program are being maintained, at a minimum.

The possibility of there being a difference in final course grades exists because online learners have different needs than on-campus learners and experience different barriers. The needs and barriers of online students is discussed in great detail within the literature review in chapter two. Due to the extent of the variance of online learner needs, barriers, expectations, and adaptability to using technology, there is concern whether online students can perform as academically successful as on-campus learners.

In contrast, online learners have the potential to outperform on-campus learners because of the flexibility seen in online learning. All participants in this study are non-traditional graduate nursing students. Non-traditional students are typically categorized as being over the age of twenty-five, full-time working professionals with families and adult responsibilities that often prevent or limit them from having access to an on-campus learning environment. Because the online MSN program evaluated in this study offers a

100% online learning format, online students may potentially outperform the on-campus student cohort because of reduced travel time to campus allows more time to focus on their course. Additionally, online programs attract students from outside the region and can potentially bring higher-achieving students to the program from various areas within the United States. And lastly, the online program offers courses that are eight weeks in duration, whereas, the on-campus courses were offered in the traditional sixteen week semester. This gives online students the opportunity to focus more closely on two courses in an eight week term as opposed to juggling four classes over the span of sixteen weeks.

Background of the Problem

Graduate nursing students are comprised of non-traditional students who often work full time, have families, and do not have the abundance of extra time to attend an on-campus graduate nursing program (Allen et al., 2007). In the past, this has been a significant barrier for registered nurses to obtain a MSN degree. It often meant that they would remain stagnant in their career as a registered nurse without the opportunity to meet their educational goals and career advancement within the nursing profession.

Now that access to college has become possible via online learning, the power and reach of the internet has moved distance education and online learning from the margins to the mainstream (Horne & Sandmann, 2012). This equates to increased college access for registered nurses to continue their education to a master's level degree while they continue to work full- time as a nurse. If online learning truly is the future of course delivery for graduate nursing programs and is becoming mainstream, then evaluation needs to occur. (Horne & Sandmann, 2012), conducted an extensive literature review to determine whether program evaluation was being conducted on online graduate nursing

programs, and if so, what were the results? Their findings cause concern because reports of systematic program evaluation of online education are scarce. This does not necessarily mean that program evaluation is not being performed, however, the lack of literature on the subject can lead one to assume that is may not be occurring, perhaps, as much as it should be.

Research Problem

As online student enrollment increases within graduate nursing programs, close attention to administrative details as they relate to program quality, improvement, student support, and academic resources should be maintained. The difficulty in maintaining a quality online program is often the consequence of a lack of resources related to shortage of nurse faculty, professional development, qualified instructional designers, and attempting to effectively address exponential program growth in a short period of time.

Because there are multiple contributing factors associated with students being academically successful or unsuccessful in an online course, there will be a discussion and overview related to common barriers of online learning as well as areas of support as they relate to overall student success in an online course.

Significance of the Research

Succeeding academically online is much different than doing so in an on-campus setting. For decades, administrative leaders in on-campus settings had the opportunity to develop and test new initiatives to improve student success as it relates to successfully passing classes, reaching graduation, retaining students, and overall student satisfaction. Now that graduate nursing programs are transitioning to an online setting, the span of

time to assess student success is not comparable to the time on-campus student success analysis has occurred. With a decreased time frame, it can be difficult to evaluate whether quality programs are available and expect graduates to have the knowledge to pass their national board exams and/or enter the nursing profession at an advanced level. Patient care is vital and having qualified graduates from online MSN programs is an important factor in future patient care.

As the process of transitioning programs at college and universities to an online setting continues, it becomes equally important to focus on the new and unique types of student needs associated with student success in online learning. On-campus programs have the historical advantage as well as decades of time to identify the resources needed to assist on-campus student needs, however, this has not been the case for online students. As the trend of online learning grows, administrative leaders should focus their efforts in the same way of ensuring student success for online students as they have in the past with on-campus students. If student success does not take center stage, the integrity and morale of online learning within the environment of higher education decreases, and online students could graduate without the skills and expertise needed to be successful in the workplace.

Definition of Terms

This study focuses on graduate nursing students enrolled at a rural, regional, public university in the mid-western United States. The graduate nursing students have been accepted into the Master of Science in Nursing (MSN) program and are focusing their concentration in either the Family Nurse Practitioner section, Psychiatric Mental Health Nurse Practitioner section, Nursing Administration section, or the Nursing

Education section which is currently being phased out. The MSN degree is an accredited, graduate level nursing program designed to allow licensed registered nurse's (RN's) to advance themselves professionally by choosing one of the concentrations associated with the MSN degree program.

To be admitted into the Master of Science in Nursing program at the institution involved in the study, one of the primary requirements, among many, is that student must have earned a Bachelor of Science in Nursing (BSN) degree from an accredited college or university. The student must also be a licensed registered nurse (RN). Most of the students in the program are working as registered nurse professionals while concurrently enrolled in the MSN program.

The student then must select an area of concentration within the MSN program that s/he is interested in pursuing. The most popular concentration includes the Family Nurse Practitioner (FNP) option. The FNP option allows graduates to become eligible to sit for the national certifying board exam to work as a certified Family Nurse Practitioner. Likewise, the Psychiatric Mental Health Nurse Practitioner option is also a program through which the graduate becomes eligible to sit for the national certifying board exam to work as a certified Psychiatric Mental Health Nurse Practitioner (PMHNP). The exam is very broad and covers a wide range of exam questions set up to test the students' knowledge and skill area within their specific concentration. The national board exam is facilitated through the American Nurses Credentialing Center (ANCC) and is nationally recognized as the primary credentialing body for the nursing profession. The university also offers a Nursing Administration concentration that is available to students who are interested in advancing their administrative nursing skills to become leaders in nursing

with administrative capabilities. Lastly, the Nursing Education option was a concentration for students seeking to advance their skills in teaching within the nursing profession. Due to low popularity and a decline nationally in this area, this program is being phased out and has very low student enrollment. Neither the Nursing Administration or Nursing Education concentration lead to any type of board certification.

All students in this study are enrolled in the MSN program as either on-campus or online status. On-campus simply means that the student is enrolled in a course that has a face-to-face component in a traditional classroom setting at the university. Through the Registrar's office, the course is coded as an on-campus course. Online learning is a phrase that is often open to interpretation and can include a broad range of approaches (Knightley, 2007). For the purpose of this study, online status is defined as taking the MSN course online, via the web, on a computer, whether it is in an asynchronous or synchronous setting. Asynchronous is defined as completing their course online at a time that is convenient for the student to be working independently. Synchronous online studying is completing the course, in sync, in live time, with the instructor or facilitator at a designated time specified by the instructor. Online courses are coded by the Registrar's office as a 100% online course.

One of the primary areas of focus of this study is to identify academic trends among online learners as is related to academic success. For the purpose of this study, it defines academic success as passing one of the primary, required core MSN courses with a letter grade of an "A," or "B." It is understood that there are many components to

academic success beyond grades, however, for the purpose of this study, the definition of academic success is passing the required courses for the MSN program.

Overview of the MSN Program

The MSN program used in this study has earned full accreditation through the Commission on Collegiate Nursing Education (CCNE) since 1996 and has exceptional positive review. This accreditation has been maintained during the transition to the 100% online course delivery mode in 2013 and remains current.

Admissions criteria to the online MSN program remains highly competitive and has become even more competitive since the transition to going online. The undergraduate cumulative GPA requirement prior to going online was set at 2.75 but has changed to a requirement of 3.0 now that the program is online.

When an MSN student is admitted to the program, they are assigned an academic advisor who provides them with information and access to completing an online orientation to the program as well as information to register for their classes. Faculty advisors are also assigned to each admitted student. Faculty advisors fulfill the role of providing professional and academic guidance as it relates to the nursing profession and assisting students with meeting their professional and academic goals.

Newly registered MSN students are also placed into an online student portal that is accessible to them by simply logging into their Blackboard account. The online student portal is a place where students can meet and talk virtually with other students in the MSN program. This provides an opportunity for peer support and networking. The portal also serves as a one-stop-shop for academic advisors to house the MSN Policy Handbook

and other departmental forms and information related to program requirements such as the completion of clinical hours. All online students have access to their student portal, 24 hours a day, through graduation.

The length and duration of the courses also changed when the program transitioned online. When offered on campus, courses were traditionally sixteen weeks long to fit into the traditional semester used in many colleges and universities. Now that the program is online, courses are offered every eight week term. This gives graduate nursing students the opportunity to take fewer classes at the same time and focus more closely on the few courses they are taking.

Students in the online program are enrolled in online courses offered via Blackboard. Blackboard is the learning management system classroom used for housing online courses. Within Blackboard, online students can log into their online course and view their course syllabus, as well as review weekly modules including course assignments due, videos, and the capability to submit assignments. Additionally, online students use Blackboard to take their online exams, view grades, and participate in classroom discussions with instructors and other students enrolled in the course.

Summary

Changing a curricular delivery mode is no easy task and should not be viewed as so. There are multiple components that define program quality and evaluation, including course pass rates. This study is aimed to investigate whether the quality in grades was also transitioned when an MSN program moved from being on-campus to online. The quality of grades in the courses, in both settings, is an indicator of student success. If on-

campus MSN students taking a course have high passing rates in their courses, then it is to be expected that online students will have the same results if the transition and maintenance of the program are being evaluated and improved.

CHAPTER 2

LITERATURE REVIEW

The appeal of transitioning on-campus degree programs and offering them online is growing in the university setting due to pressures to increase access to higher education (ASHE, 2014). Offering online courses and entire programs via the internet is now part of the fabric of college and university life in the USA and other developed countries (Holzweiss, Joyner, Fuller, Henderson, and Young, 2014). In 2013, the American Association of Colleges of Nursing (AACN, 2013) reported that 85.3% of Master of Science in nursing programs were delivered using some form of distance education, including online education. Although there are numerous reasons for the appeal of transitioning a graduate nursing program to go online, it is evident that a well thought out plan to ensure the continuity of student success needs to be considered by those in leadership roles. A review of the literature in online learning, at the university level, shows key factors related to the purpose of transitioning a program into an online format to include quality program evaluation, identifying barriers for student success, and approaches to online student retention, should all be comprehensively considered when understanding and meeting the expectations and needs of online graduate nursing students.

Need for Graduate Nursing Programs to Transition Online

The impact of online learning has transcended the traditional scope of academia, thus leading to a millennial migration away from centrally located classrooms and into the realm of convenience, accommodation, and personalization. This adjustment in the

approach to education follows on the heels of a culture that has ridden a wave of demand for expediency, one in which sensory overload and the necessity of multi-tasking is at alarming levels. This fast-paced, high-demand culture is evident in both the urban and rural societal landscapes, and with both undergraduate and graduate college programs, including graduate nursing programs.

In reference to online graduate nursing programs, the American Association of College of Nursing (2014) reported that 78,089 qualified applicants were turned away from baccalaureate and graduate nursing programs in 2013 due to insufficient numbers of faculty, clinical sites, and/or clinical preceptors, lack of classroom space and budget constraints. Because of the nursing faculty shortage, web-based graduate nursing programs are being offered to encourage nurses to return to school (Carpenter, S.H., 2015). The hope is this will provide a larger candidate pool for hiring qualified nursing faculty. In addition, the use of online learning is viewed as a viable option to address the lack of classroom space as well as provide monetary support to struggling budgets through tuition dollars. Not only are graduate nursing programs struggling to accommodate nursing students, the nursing profession is facing a shortage like it has never experienced in the past (Mancuso-Murphy, 2007). For this reason, among others mentioned, the benefits of transitioning to a distance education model appear to be a current solution for many graduate nursing programs.

It is no secret that budget constraints affect colleges more adversely each year. Because this is one of the many factors related to on-campus degree programs choosing to transition to an online setting, it is worthwhile to consider the potential cost-effectiveness to doing so. No institution will have the same cost-benefit assessment as

another college or university. When determining whether it would be more cost efficient to put a degree program all online, there are several factors to consider and assess before making the commitment to transition.

In a relevant study surrounding the cost-benefit analysis of online programs, Inglis (2007), suggests comparing the actual cost aspects of the two delivery systems. This can be difficult to do because it is not possible to know to what extent student enrollment growth in an online setting will occur. Evaluating data and research for specific degree programs that transitioned online would be a positive indicator to determine the possibility of increased student enrollment and provide administrators with an estimate. An analysis of research in this area needs to be conducted by Department Chairs and departmental faculty to identify the potential success of an online program and determine financial gain.

Administrators must also consider hidden costs that accrue to the institution, staff, and students when performing a cost analysis (Thompson & Vidal, 2011). An example of this would be the state higher education authorization state policies within the United States. Some states require colleges and universities to complete an application process and pay high fees to allow them to offer their online degree programs to residents of their state. Failure to do so can result in an online program being legally forced to no longer offer their online program at all. The consequences of this on institutions and students can be devastating.

Barriers to Distance Learning

Although the benefits of online education for graduate nursing student seem endless, it is not without common barriers. No mode of education is seamless, and learners adapt and prefer different styles of learning. Online education is no different. In a study of rural, online nursing students, both benefits and barriers experienced throughout their academic career were discussed in great detail. For the purpose of discussing barriers in online learning, the focus will be on the experiences the students encountered that contributed to having difficulty with a distance learning model.

In a relevant study, rural nursing students on the island of Hawaii were given the opportunity, in a qualitative study, to discuss their negative encounters related to their online nursing program (Kataoka-Yahiro, Richardson, & Mobley, 2011). Through discussion, common barriers related to their experiences were noted. The first category of common barriers included human, work, and technical support issues. Students in the program commented extensively on these barriers by indicating they do not have access to computers at work and sometimes not even at home (Kataoka-Yahiro, Richardson, & Mobley, 2011). Furthermore, in relation to the human factor, they stated there were self-efficacy issues related to taking an online class. It can become more difficult to be self-motivated and self-disciplined to complete an online class. In regards to lack of technical support, the factors include the use of outdated equipment, becoming familiar with new equipment, as well as the mode of the learning management system used.

Other common barriers to distance education is the financial impact and time constraints issue (Kataoka-Yahiro, Richardson, & Mobley, 2011). The financial cost of computer equipment, tuition, and internet were most commonly mentioned among the

online nursing students in the study. One suggestion to alleviate or reduce the financial costs was use of student grants and loans, as well as tuition assistance programs through their employers. According to the student nurses, distance education is a solution for them to continue to maintain their busy work schedules. Although the students were able to continue working full time, they noted that there was an issue with time used to work through and learn computer software and hardware that they were not familiar with.

One area of concern from graduate nursing faculty in an online environment, is the lack of social presence. (Mayne & Wu, 2011). In their research study, faculty define social presence as the degree to which participants in computer-mediated communication feel affectively connected to one another. In a traditional classroom, faculty have the ability to make eye contact and read the body language of their students. Instructors can easily use this information to gage when students do not understand the content of the topic being discussed. In an online format, this is a common barrier and is not as easy for faculty to address when text-only communication is primarily used. To address this concern, Mayne & Wu, 2011, conducted a study to examine the effects of purposeful integration of social presence strategies in an online graduate nursing class. This was a comparative study that examined the effects of using intentional social presence techniques; initiated by the instructor.

Although their study sample was relatively small, findings support purposeful application of social presence techniques by the instructor as having a significant and positive impact on student perceptions of social presence and group interaction, as well as a desire to continue learning in an online format (Mayne & Wu, 2011). In the study, they used various strategies of initiating social presence in an online classroom. Some of these

strategies included a personal email from the instructor to be sent two weeks prior to the start of the course. In addition, the course was opened in Blackboard prior to the first day of class in an effort to allow students to look around and have the opportunity to ask questions.

The best way to ensure current and future barriers related to distance learning are addressed is to have ongoing evaluation from students, staff, and faculty. Feedback from all facets of the system provide administration with the opportunity to identify problems and provide meaningful solutions to work through issues at all levels. In a survey of 631 rural undergraduate and graduate online nursing students, results indicate that the emphasis for student support related to obtaining information about their online courses, orientation to technology, and importance of learning resources were marked as the most common best practices that should be occurring with online students enrolled in web-based courses (Billings, Conner, & Skiba, 2001).

Program Evaluation

The trend of graduate nursing programs transitioning to a web based delivery format is on the rise and is expected to continue to grow. Graduate nursing programs, in an effort to reduce the shortage of graduate level trained nurses (Mancuso-Murphy, 2007), are swiftly transitioning from on campus only courses to an online format. As the demand is forcing programs to make this change as swiftly as possible, questions surrounding the quality of the programs as they quickly adapt to a new course delivery model, are also increasing. Although the emergence of new technologies within online learning is inevitable, it does not change the goals of education (Allen, Mabry, Mattrey, Bourhis, Titsworth, & Burrell, 2004).

A review of literature conducted by, Horne & Sandmann, (2012), sought to determine whether program evaluation of online graduate nursing programs are occurring, and if so, what are the results? For the purpose of defining program evaluation in the case of an online graduate nursing program, program evaluation is the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the programs, improve or further program effectiveness, increase understanding, and inform decisions about future programming (Patton, 2008). The primary concern for identifying the use of program evaluations in online graduate nursing programs is to address the concern that online course availability has outpaced the evaluation of online courses for quality, particularly at the program level (Avery, Cohen, & Walker, 2008; Bangert, 2006; Billings, 2000).

Of the empirical findings related to program evaluation of web-based graduate nursing programs, Horne & Sandmann, (2012) discovered only five articles that met the criteria for high yield research from program evaluation of graduate nursing programs. In their analysis, one of the articles written by Lindsay, et al. (2009), only evaluated the experience of nine nursing faculty who taught in a web-based graduate level nursing program. Faculty included in the study identified challenges related to pedagogical issues and the time commitment required for course development, course management, and student engagement (Horne & Sandmann, 2012). In a second article, written by Singh et al. (2008), sought to evaluate student perspectives from an online graduate nursing program. The data was grouped into three categories including achievements, challenges, and recommendations. Horne & Sandmann, (2012), describe student achievements from this study as staying in the course and supporting peers, while challenges from the study

include balancing the demands of the program with other priorities and shared methods of assessment of students' work.

Student evaluation of instruction is an important component in establishing the credibility of distance education and is used prevalently in higher education for purposes such as strategic planning, curriculum improvement, and faculty evaluation (Liu, 2012). A study, conducted by Liu, (2012), investigated the factors that impact online student evaluation of instruction in higher education. The study was based on a large sample of 11,351 students taught by 1,522 instructors from 29 colleges and universities. Key findings reveal that in a distance education setting, gender and class size are no longer significant predictors of academic success. Factors such as reasons for taking the course, student class status and instructor's academic rank have a significant impact on student evaluation of learning and instruction. "While a number of factors influence a student's decision to persist or dropout, it will become increasingly important for online program administrators to control institutional factors that support student participation and success" (Tello, 2007, p. 60).

In response to student evaluations of instruction, administrative leaders need to also consider how well faculty is adapting to teaching their online courses. Results from evaluations can identify improvements are needed and where faculty is doing a favorable job. This can provide the online learning office at the college or university with areas that the faculty may or may not need continued professional development.

When structuring systematic program evaluation around a benchmark of what a successful distance education program should encompass, administrators have many options to consider. Watkins, (2014), says the definition of success, as well as the related

criteria for evaluating success for any distance learning course, program, or initiative will vary greatly based on the individual perspective of the evaluator. Regardless of whether the evaluator is an instructor, learner, program administrator, technical support staff, college president, s/he will want to consider a range of variables to consider as online degree programs are designed, developed and implemented. Watkins, (2014) adds that the definition of success for an online degree program is often structured through the eyes of the stakeholders involved, such as a college president, so it is imperative, for the purposes of program evaluation, to know what their vision of success is. It is also possible to be successful through the viewpoint of the learner since many of the perspectives surrounding success often share similar criteria.

Online Student Retention Approach

Graduate nursing students cannot perform well if they are not retained in the program, whether instruction is delivered on-campus or online. Although there are many transferable circumstances related to a student withdrawing from an on campus graduate nursing program as well as an online one, there are many specific indicators related to student support that are only identifiable for online students.

According to Gazza and Hunker, (2014), the definition of retention is "the continued enrollment in an online program from admission through program completion" (p.1125). To optimize the academic success rate of graduate nursing students as it relates to course completion rates and earning satisfactory grades in those courses, educational leaders should understand and predict what barriers their students may encounter and provide resources that will have a high impact in retaining them.

Lee and Choi, (2011), identified 69 factors that affected a students' decision to drop out from an online course. These are characterized by three main categories including student factors, course/program factors, and environmental factors. "Student factors associated with a lower possibility of dropping an online course included greater academic aptitude, more experience with higher education, a history of higher levels of academic performance, previous experience with course content, possession of management and technology skills, an internal locus of control, greater self-efficacy, more satisfaction with the course, and more confidence in computer skills" (Gazza, 2013, p.1126). Lee & Choi, (2011), add that course/program factors associated with being less likely to drop out from an online course include a well-designed course, the availability of systematic support, faculty-student interactions, and high levels of participation." Additionally, they concluded that the possibility of student drop out was greater when environmental factors were involved, including students working full time, feeling pressure to work more hours, and experiencing life challenges and unexpected life events without support.

This evidence proves that there are numerous reasons why online students drop out of a course or withdraw from an online program. When analyzing these factors, it is apparent that many of them are interrelated, just as they often are with on campus students. Educational leaders need to understand that "there is not one sole factor that accounts for the difference between on-campus and online student retention" (Fetzer, 2013, p. 14). "Student retention is a multidimensional problem requiring a multifaceted approach" (Gazza, 2014, p.1125).

Although various studies confirm that many institutions have lower rates of online student retention in programs and courses when compared to their face-to-face counterparts (Fetzner, 2013), there are still universities who achieve very high retention rates among their online learners. In a study performed by Moore & Fetzner, (2009), they identified five institutions that had achieved an 80% or greater online student retention rate. They outlined effective practices that included activities that were to be completed prior to students entering their online courses as well as services provided during enrollment in online courses. Comprehensively, these practices included course design strategies, technical and help desk support, online faculty professional development, and online classroom management techniques. Student success begins when approval for an on-campus program to go online occurs. At this stage, high level administrative planning can greatly affect the outcome of how well students in the program will perform academically.

In a study conducted by Fetzer, (2013), unsuccessful online students earning a grade of either a "W" or "F," were surveyed to offer advice to new online students to provide feedback of what they needed to have been successful. Their advice included not getting behind in their courses, using good time management and organizational skills, setting aside time every week for their online class, knowing how to receive technical help, understanding how much writing is involved, attending the online orientation, and asking the professor if questions arise, among others. In this same study, these same unsuccessful online students indicated the following factors as the top three reasons why they were unsuccessful. First, they felt that they had gotten too far behind in the class to catch up. Second, they had personal problems in their life related to health, job, and child

care issues. Lastly, they discovered after enrolling in their online classes that they could not handle combined study with their work and/or family responsibilities.

Is it possible to characteristically profile the type of online student who will be most successful in an online program? In gathering data for a related study, Fetzner, (2013), identified three factors that impacted the academic performance of online students that contributed to their heightened success. The first characteristic was the age and time of registration as being a significant contributor to grade performance. It was discovered that students over the age of twenty-five had shown increased performance. Another factor for success was when the online student registered for their online course. Results show that they are more successful if they are registered for their online class at least five or more weeks prior to the start of the semester. In this case, they had the best chance of earning at least a grade of C or better. Registering early can provide students with the allowable time to become familiar with the institution as well as ordering books and securing financial assistance in a timely manner. Lastly, the more transfer credits the online student earned from another institution increased their chances of earning at least a grade of a C or better in the students' online course.

There are common characteristics of the various types of online students who are typically more successful at online learning. Although this is true, Milman, (2014), makes the argument that learners do not always have the choice to take an online course or enroll in an all-online degree program. Often, it is the only option that is available to them. Milman, (2014), adds that these types of learners make it even more important for program administrators to provide extra support to foster the support of all learners. There are many resources that must be made available to online students, including high-

quality orientation, careful monitoring, and research about factors that promote the success of all students (Milman, 2014). It is at the program level where factors unique to the program and institution should be considered for short and long term assessment of the needs of online students.

Are Online Students Academically Successful?

Most scholarly research focuses on the needs of online students as well as barriers they commonly encounter. There is not currently a sizeable amount of research focused on comparing how well online students are academically performing compared to on-campus students in the same degree program, specifically a graduate Master of Science in Nursing degree program. Much of the research is also focused on individual online student experiences as an online student. The research goes into great detail about the factors related to why students may prefer online learning as compared to the traditional classroom setting and also discuss their struggles with being successful in an online setting.

After reviewing the last five years of research in the Journal of Higher Education, The Review of Higher Education, the Journal of Higher Education Policy and Management, and Distance Learning, only one article was relatively similar to this study. The study performed by Xu & Jaggars, (2014), focused on the performance gap of students in online and face-to face courses. Although similar, this study represented a dataset of almost 500,000 courses taken by over 40,000 community and technical college students in Washington State.

The results did show that all types of students suffered decrements in performance in online courses and the online performance gaps were also wider in some academic subject areas than others. Although this study is important in analyzing data of online face-to-face community college students, it does not reflect the same type of student or degree level as those used in this study.

In another study conducted by Ya Ni (2013), compared student performance in online and in-person classes in terms of interaction and efficacy in a Master of Public Administration class. This is a graduate level program with non-traditional students similar to those included in the sample of MSN students. Their study compared learning effectiveness in six (three online and three on-campus) research methods classes taught by the same instructor at California State University – San Bernadino from 2010-2012. The results of the study show that learning effectiveness as measured by student grades is independent of the mode of instruction.

A different study was conducted by Dutton, Dutton, & Perry, (2001), at the University of North Carolina, which sought to determine if online students in the same undergraduate course did as academically well as students taking the same course, on-campus. This study included a sample size of 312 students enrolled in an undergraduate computer science course at the University of North Carolina. Of the 312 students, 141 students were enrolled in an online section of the course, while 171 students were enrolled in the traditional lecture on-campus course. The purpose of the study was to determine if the students in the online delivery performed as well as the traditional students in the on-campus course.

The results of the study were determined by final course grades. Online students in this study, who completed the course did better than lecture students. Their conclusion demonstrates that online students can perform just as well or even better than students in the traditional lecture setting.

In the following chapter, the methods of the study are outlined. The study seeks to identify whether online graduate nursing students perform as well after the graduate nursing program transitioned from an on-campus model to a one-hundred percent online learning environment. Sections related to the description of the research question, study context, sample, data collection and analyses, and limitations of the study will be discussed.

CHAPTER 3

METHODS

This study will be performed to determine if a specific mode of course delivery affects the grades of graduate nursing students in one of the required core courses in the Master of Science program. There are two modes of course delivery used in this study that include on-campus and online. The data will show whether or not the mode of course delivery impacts student grades which then determines whether the student passed or failed the course. The following sections highlight the methods.

Research Question

The purpose of this study is to examine the impact of on-campus and online courses on the final grades of graduate nursing students at Eastern Kentucky University. Considering that information, the specific research question is:

> Can online students perform as well when a graduate nursing program is transitioned from an on-campus course delivery mode to an online course delivery mode?

Context of the Study

The University

The Master of Science program evaluated in this study is from a Midwestern, regional university. Located in Richmond, Kentucky, Eastern Kentucky University is a public university with a current enrollment of approximately 14,500 students who are enrolled in on-campus courses and approximately 2,300 active students in online degree

seeking programs. Eastern Kentucky University offers a wide range of general and liberal arts degree programs at the undergraduate, graduate, pre-professional, and certificate level.

Master of Science in Nursing: Required Core Courses

Among all concentrations in the MSN program, including Family Nurse Practitioner, Psychiatric Mental Health Nurse Practitioner, Nursing Administration, and Nursing Education, students are required to take all of the four core required courses as a degree program requirement. Each core course is valued at three credits each. The courses are NSC 840: Nursing Theory, NSC 842: Advanced Nursing Practice Issues, NSC 890: Research in Rural Nursing, and NSC 892: Research Project. is a required course that all MSN students must take.

It should be noted that the MSN program requires all MSN students to earn at least a letter grade of a "B" in each course to progress towards completion of the program. Any earned grade of a "B" or better is considered passing the course, while any final earned grade of less than a "B" is considered failing the course. If a student fails a course, s/he is automatically withdrawn from the MSN program and is no longer an active MSN student. Students who fail a course must reapply to the program for readmission consideration. Any student earning less than a "B" grade in any of the four required courses is classified as earning a failing grade.

Sample

This study will use the following decision rules to generate the final student sample used in this study:

1) Students included in this study were enrolled in the Master of Science in Nursing program at EKU between the years of 2010-2015;
2) Students had to be enrolled in one of the four required courses as offered through the MSN program; and
3) They had to have earned a passing or failing final course grade in one or more of the four required courses of the MSN program.

The final sample includes 1,815 students.

Table 3.1 represents on-campus students as well as online students identified by their enrollment in the specific course delivery mode for each of the four required courses in the study. Of the total sample size (n=1,815) among all four courses, NSC 840 had17.3% (n=93) on-campus student enrollment and 82.7% (n=445) online student enrollment. NSC 842 had 28.5% (n=94) on-campus enrollment and 71.5% (n=236) online student enrollment. NSC 890 had 17.2% (n=90) on-campus student enrollment and 82.8% (n=434) online student enrollment. NSC 892 had 17.3% (n=73) on-campus student enrollment and 82.7% (n=350) online student enrollment. Of the total sample size, 19.3% (n=350) were represented by on-campus students prior to the program transitioning to an 100% online delivery mode. After the program transitioned online, the sample size includes 89.7% (n=1465) of online students.

Table 3.1 Course by Course Delivery

Course * Course Delivery Crosstabulation

			Course Delivery		Total
			On-campus	Online	
Course	NSC 840	Count	93	445	538
		% within Course	17.3%	82.7%	100.0%
	NSC 842	Count	94	236	330
		% within Course	28.5%	71.5%	100.0%
	NSC 890	Count	90	434	524
		% within Course	17.2%	82.8%	100.0%
	NSC 892	Count	73	350	423
		% within Course	17.3%	82.7%	100.0%
Total		Count	350	1465	1815
		% within Course	19.3%	80.7%	100.0%

The Master of Science in Nursing program was chosen because the program was taught on-campus and then was transitioned to an online environment. Additionally, the program has been offered via online for a substantial amount of time (3 years), thus, this offers a desirable sample size of collection of final grade data to compare with on-campus grade data. The national trend of graduate level nursing programs transitioning to an all-online course delivery format is high. According to the American Association of Colleges of Nursing (AACN, 2011), in 2011, almost 83% of Master of Science in nursing programs were delivered using some form of distance education. Because this particular type of program is offered online in high numbers, it was chosen as a program through which other programs could potentially find the data and findings useful.

Student Service Resources for Online MSN Students

Online students in the MSN degree program are offered an abundance of support to ensure their success in the program. All of the core courses have a course duration of

eight weeks, with the exception of NSC 892: Research Project. NSC 892 was initially offered in the first year it went online as an eight week course, during the summer term, however, it was determined by faculty that the course needed to be extended to the full twelve weeks in the Summer. The purpose for this change was to give the online students in the course the opportunity to have more time to complete their final research project.

When online students begin the program, they are provided with an orientation to Eastern Kentucky University that includes topics of how to use the learning management system, Blackboard. Additionally, new students are oriented with using library resources, tutoring options, and detailed information about the curriculum and completing their required number of hours with a preceptor toward the end of their program. Technical support is also offered to online students having issues with student email or Blackboard.

When student capacity in an online program exceeds twenty-five students, a facilitator is brought into the course to assist the lead instructor with faculty responsibilities within the course such as grading assignments and encouragement/interaction with students in the course. For every twenty-five students enrolled in the course, a new facilitator is brought in to assist. If an online course has one-hundred students enrolled in it, there will be one lead instructor and four facilitators. This provides a teacher student ratio of 1:20 in this example.

Most instructors in the program follow a consistent routine to open a weekly module in their course on a Sunday. When a weekly module is open, students will know what is expected of them and what assignments they must complete and submit by Saturday, of the same week, at midnight. This type of consistency provides students with the opportunity to know at the beginning of the week what their course load consists of

throughout the week. Through planning, online students are able to integrate their class assignments into their schedule throughout the week as they also fulfill their employment and family responsibilities.

Although the MSN program is currently only offered online, the faculty for the program have offices on-campus. Many of the students in the program are geographically located in the same state as Eastern Kentucky University or live in a surrounding state. If any online student is seeking in-person advising with their faculty advisor or academic advisor, most online students are only within a reasonable driving distance away. Additionally, faculty are encouraged to respond to an e-mail from a student within twenty-four hours. This provides students with the timely support they need to have their questions or concerns addressed.

Research Design and Data Collection

This study will use a causal comparative research design and will use data collected directly from the University's database, BANNER. Banner is the database system where student and course data is stored, including Course Reference Numbers (CRN's), and final course grades. The data that will be extracted from BANNER includes CRN identification numbers specific to the four core MSN courses offered during the time period of January 2010 to December 2015, and the final grades earned in the courses included in this study. The dependent and independent variables used in this study are predictors of student success.

Data Analysis Procedures

Descriptive statistics including crosstabulations will be reported, however, the primary data analysis procedure used for this study will be using a Chi Square analysis. The dependent variable in this study is the passed or failed classification based on a students course grade in either of the courses in the study. The independent variable is the mode of delivery of the course—on-campus or online. Comparisons of the mean of final grades will be made between the final grades that are from the time the course was offered on-campus to the final grades from the time after the courses were offered in an online delivery format. Microsoft Excel will be used for all data analyses. Significance will be determined at the .05 level.

The null hypothesis for this study is that there will be no significant difference between the mean of the final grades from the online students compared to the final grades of the on-campus students. The alternate hypothesis is that there will be a significant difference between the online student grades and the on-campus student grades.

Limitations of Study

It should be noted that there are several limitations of this study. First, this study was only conducted at one university and the results cannot be generalized at other institutions of higher education with Master of Science in nursing programs. The specific type of student support resources may be specific and unique to Eastern Kentucky University and may have impacted the final results of the study. Other institutions offering MSN programs may or may not offer similar on-campus and online student

support and other variables that impact the final grades in core MSN courses. The findings from this small-scale study cannot be generalized to a larger population of MSN programs, however, they may provide some insight into the type of comparative data other programs may see when they transition from an on-campus only program to an online environment.

This study analyzes and compares final course grades as a method to determine whether online students are as academically successful as the traditional on-campus cohort. Although the use of final grades is used to determine academic success, it should be noted that grades can be a subjective measure and does not encompass all the factors contributing to overall academic success in a course.

The sample of students included in this study include graduate nursing students who have already earned a Bachelor of Science in Nursing degree (BSN). The BSN degree is a four year, undergraduate degree. Additionally, all of the students in the sample are board certified Registered Nurses. These are two minimum entry-level requirements for eligibility to apply to the MSN program for admission consideration. For this reason, the sample includes high-achieving professional nurses with prior college experience and could potentially effect the lack of variance in retention in an online program as well as positive academic success as it relates to final course grades.

There are variables not included in this study. These variables include student status (full time or part time) as well as variances in course duration, instructors, and whether the student is working full time, part time, or not at all. These excluded variances could potentially affect the academic success of each student. When the program transitioned to an online format, many of the same instructors were utilized to teach the

same courses via online. This provides some consistency, however, it should be noted that using the same instructor for the same courses does not always equate to the same use of teaching style. The change in curriculum delivery could potentially cause the instructor to teach differently and assign grades based on different expectations. For this reason, this is considered a limitation. Although the course instructors may vary or stay the same, the learning objectives and course project goals are the same regardless of whether the course was offered on-campus or online.

CHAPTER 4

RESULTS

Objective

The study was performed for the purpose of examining the impact of on-campus and online courses on final grades from graduate nursing students enrolled in the Master of Science in Nursing program at Eastern Kentucky University. The results of the study would determine if online students were as academically successful as the on-campus students were prior to the MSN program transitioning into an online delivery mode.

The dependent variable in this study is the passed or failed classification based on a students course grade in either of the courses in the study. The independent variable is the mode of delivery of the course—on-campus or online.

This is a quantitative study and will be discussed using descriptive statistics, including the use of crosstabulations. A Pearson Chi Square test will be used as the primary statistical method of analysis for the course NSC 890 and the Fisher's Exact Test will be used for NSC 840, NSC 842, and NSC 892.

Guiding Question

The primary research question guiding this study asks the following question: "Can online students perform as well went a graduate nursing program is transitioned from an on-campus delivery mode to an online course delivery mode?"

Unit of Study

In January of 2013, the MSN program at Eastern Kentucky University was transitioned into a 100% online degree program. This study focuses on the final course

grades of on-campus students in the MSN program from January 2010 through December 2012. It also includes the final course grades of online students in the MSN program from January 2013-December 2015. The final grades will be collected from all four of the required core MSN courses, including NSC 840, NSC 842, NSC 890, and NSC 892.

Once final grades were collected, it was determined which of those grades were earned passing grades including an "A," or "B." Any earned grade that was less than a "B" was considered a failing grade for the specified course. Grades including a "W" for withdrawn, and, "I" for incomplete, were excluded.

Table 4.1 displays the number of students among all four required courses who either passed or failed a course. Of the on-campus cohort, 2.9% (n=10) failed a course during the last three years that the MSN program was offered on-campus. In contrast, 1.8% (n=27) of the online cohort failed a course during the first three years that the program was transitioned online. The on-campus cohort had a pass rate of 97.1% (n=350), while the online cohort had a pass rate of 98.2% (1438). Overall, there was 2% (n=37) of MSN students among both cohorts who failed a course, and 98% (n=1778) who passed a course.

Table 4.1: Course Delivery by Pass/Fail

Grade * Course Delivery Crosstabulation

			Course Delivery		Total
			On-campus	Online	
Grade	Fail	Count	10	27	37
		% within Course Delivery	2.9%	1.8%	2.0%
	Pass	Count	340	1438	1778
		% within Course Delivery	97.1%	98.2%	98.0%
Total		Count	350	1465	1815
		% within Course Delivery	100.0%	100.0%	100.0%

A Chi Square – Fisher's Exact Test was conducted for course NSC 840: Nursing Theory. The Fisher's Exact Test had to be used to test the data due to N<5 in the On-Campus fail rate. If N<5, the Pearson's Chi Square analysis cannot be performed. This test is used to test null hypothesis where .05 would indicate significance. The results are displayed in (Table 4.2). The on-campus cohort had a 0% (n=0) fail rate. Not one student failed NSC 840 from January 2010 through December 2012 at any time that it was offered. In contrast, there were 2.7% (n=12) online students who failed the course when it was offered online between January 2012 through December 2015. On campus students had a pass rate of 100% (n=93) while online students had a pass rate of 97.3% (n=445).

Overall, both cohorts combined earned a fail rate of 2.2% (n=12) and a pass rate of 97.8% (n=538) in NSC 840 through January 2010 – December 2015. The Fisher's Exact Test resulted in a P-value equal to .236. Due to the rate of significance (.05), the test results are non-significant. This suggests that there is not enough evidence to support that online students taking NSC 840 perform at a higher academic level than the on-campus cohort.

Table 4.2: Chi Square – Fisher's Exact Test of Pass/Fail - NSC 840

Grade * Course Delivery Crosstabulation[a]

			Course Delivery		Total
			On-campus	Online	
Grade	Fail	Count	0	12	12
		% within Course Delivery	0.0%	2.7%	2.2%
	Pass	Count	93	433	526
		% within Course Delivery	100.0%	97.3%	97.8%
Total		Count	93	445	538
		% within Course Delivery	100.0%	100.0%	100.0%

a. Course = NSC 840

Chi-Square Tests[a]

	Exact Sig. (2-sided)
Fisher's Exact Test	.236

a. Course = NSC 840

A Chi Square – Fisher's Exact Test was also conducted for course NSC 842: Advanced Nursing Practice Issues. The Fisher's Exact Test also had to be used for NSC 842 to test the data due to N<5 in the On-Campus and Online fail rates. If N<5, the Pearson's Chi Square analysis cannot be performed. This test is used to test null hypothesis where .05 would indicate significance. The results are displayed in (Table 4.3). The on-campus cohort had a 3.2% (n=3) fail rate while it was taught between January 2010-December 2012. In contrast, there were 1.3% (n=3) online students who failed the course when it was offered online between January 2012 through December 2015. On campus students had a pass rate of 96.8% (n=91) while online students had a pass rate of 98.7% (n=233).

Overall, both cohorts combined earned a fail rate of 1.8% (n=6) and a pass rate of 98.2% (n=330) in NSC 842 through January 2010 – December 2015. The Fisher's Exact Test resulted in a P-value equal to .358. Due to the rate of significance (.05), the test results are non-significant. This suggests that there is not enough evidence to support that online students taking NSC 842 perform at a higher academic level than the on-campus cohort.

Table 4.3: Chi Square – Fisher's Exact Test of Pass/Fail for NSC 842

Grade * Course Delivery Crosstabulation[a]

			Course Delivery		Total
			On-campus	Online	
Grade	Fail	Count	3	3	6
		% within Course Delivery	3.2%	1.3%	1.8%
	Pass	Count	91	233	324
		% within Course Delivery	96.8%	98.7%	98.2%
Total		Count	94	236	330
		% within Course Delivery	100.0%	100.0%	100.0%

a. Course = NSC 842

Chi-Square Tests[a]

	Exact Sig. (2-sided)
Fisher's Exact Test	.358

a. Course = NSC 842

A Pearson Chi Square test was used as the analysis of data for NSC 890. This course did not warrant the use of a Fisher's Exact Test because n>5 in each pass or fail category. This test is used to test null hypothesis where .05 would indicate significance. The results are displayed in (Table 4.4). The on-campus cohort had a 7.8% (n=7) fail rate while it was taught between January 2010-December 2012. In contrast,

there were 2.1% (n=9) online students who failed the course when it was offered online between January 2012 through December 2015. On campus students had a pass rate of 92.2% (n=83) while online students had a pass rate of 97.9% (n=425).

Overall, both cohorts combined earned a fail rate of 3.1% (n=16) and a pass rate of 96.9% (n=508) in NSC 892 through January 2010 – December 2015. The Pearson's Chi Square Test resulted in a P-value equal to .004. Due to the rate of significance (.05), the test results are significant. This suggests that there is sufficient evidence to support that online students taking NSC 890 perform at a higher academic level than the on-campus cohort.

Table 4.4: Pearson Chi Square of Pass/Fail for NSC 890

Grade * Course Delivery Crosstabulation[a]

			Course Delivery		Total
			On-campus	Online	
Grade	Fail	Count	7	9	16
		% within Course Delivery	7.8%	2.1%	3.1%
	Pass	Count	83	425	508
		% within Course Delivery	92.2%	97.9%	96.9%
Total		Count	90	434	524
		% within Course Delivery	100.0%	100.0%	100.0%

a. Course = NSC 890

Chi-Square Tests[a]

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	8.193[b]	1	.004

a. Course = NSC 890

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.75.

Directional Measures[a]

			Value
Nominal by Interval	Eta	Grade Dependent	.125
		Course Delivery Dependent	.125

a. Course = NSC 890

A Chi Square – Fisher's Exact Test was also conducted for course NSC 892: Research Project. The Fisher's Exact Test also had to be used for NSC 892 to test the data due to N<5 in the On-Campus and Online fail rates. If N<5, the Pearson's Chi Square analysis cannot be performed. This test is used to test null hypothesis where .05 would indicate significance. The results are displayed in (Table 4.5). The on-campus

cohort had a 0% (n=0) fail rate while it was taught between January 2010-December 2012. In contrast, there were 0.9% (n=3) online students who failed the course when it was offered online between January 2012 through December 2015. On campus students had a pass rate of 100% (n=73) while online students had a pass rate of 99.1% (n=347).

Overall, the combined cohorts earned a fail rate of 0.7% (n=3) and a pass rate of 99.3% (n=423) in NSC 892 through January 2010 – December 2015. The Fisher's Exact Test resulted in a P-value equal to 1. Due to the rate of significance (.05), the test results are non-significant. This suggests that there is not enough evidence to support that online students taking NSC 892 perform at a higher academic level than the on-campus cohort.

Table 4.5: Chi Square – Fisher's Exact Test of Pass/Fail for NSC 892

Grade * Course Delivery Crosstabulation[a]

			Course Delivery		Total
			On-campus	Online	
Grade	Fail	Count	0	3	3
		% within Course Delivery	0.0%	0.9%	0.7%
	Pass	Count	73	347	420
		% within Course Delivery	100.0%	99.1%	99.3%
Total		Count	73	350	423
		% within Course Delivery	100.0%	100.0%	100.0%

a. Course = NSC 892

Chi-Square Tests[a]

	Exact Sig. (2-sided)
Fisher's Exact Test	1.000

a. Course = NSC 892

Figure 4.1 is a bar graph chart to compare pass rates among the four MSN courses in this study based on course delivery method. The purpose of this study was to identify

if the online students in the MSN program were performing as well as the on-campus cohort did prior to the program transitioning online. According to the pass rates below, On-Campus students enrolled in NSC 840 had a higher passing percentage of 100% as compared to the online cohort rate of 97.3%. In NSC 842, online students outperformed on-campus students by earning a passing percentage rate of 98.7% compared to the on-campus rate of 96.8%. NSC 890 yielded an outperformance of online students with a passing percentage rate of 97.9% while the on-campus cohort had a rate of 92.2%. And lastly, on-campus NSC 892 students had a higher passing rate of 100% while the online cohort for this course had a passing rate of 99.1%. Both cohorts combined have a total passing percentage rate of 96.8%

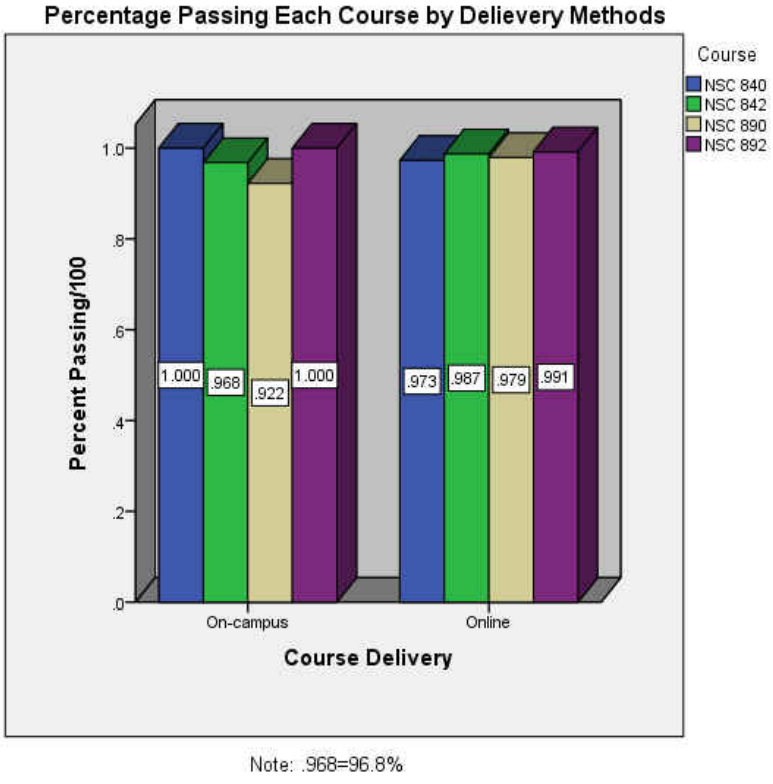

Figure 4.1: Percentage of Pass Rates per Course by Delivery Model

CHAPTER 5

DISCUSSION

Overview

A review of the findings from the study will be discussed in this chapter as well as a summary of the research, an interpretation of the results, and implications for future research. The results of this study provide faculty, staff, and students, in the college setting, the opportunity to gage academic performance of online college students when compared to students enrolled in an on-campus degree program. A discussion surrounding the conclusion of this study, including main points of the study, will provide an exploration of what gaps in current literature exist regarding online student academic performance and success.

Summary of the Study

This study was conducted to examine if there was a gap between online student academic performance of graduate nursing students in the Master of Science in Nursing program at Eastern Kentucky University, after the program transitioned online and on-campus graduate nursing students in the same program, prior to when the degree program was transitioned to an online setting. The purpose of this study was to identify if the online cohort of students were as academically successful as the on-campus cohort of students. If the online cohort of students was as academically successful or more academically successful as the on-campus cohort of students, it might be confirmed that effective strategies related to student services, faculty professional development, program

evaluation, and continuity of student success was also transitioned when the MSN program went 100% online.

The analysis of the data showed that online students in NSC 890 perform at a higher academic level when compared to the on-campus course delivery mode of the course. This was conducted using the Pearson Chi Square test. For the other three courses in the study, including NSC 840, NSC 842, and NSC 892, a Fisher's Exact Test was used and the results show that online students did not outperform the on-campus cohort.

Interpretation of Results

This is a quantitative study using descriptive statistics, including the use of crosstabulations. A Pearson Chi Square test was used as the primary statistical method of analysis for the course NSC 890 and the Fisher's Exact Test was used for NSC 840, NSC 842, and NSC 892.

Initially, a Pearson Chi Square was the primary statistical method of analysis for all four courses included in this study. Due to NSC 840, NSC 842, and NSC 892 have less than a $n<5$ value in at least one of its categories (course failure), a Fisher's Exact Test was used as the primary statistical method of analysis for them. Because NSC 890 has values in all categories that equaled $n>5$, a Pearson Chi Square test was used for it.

The data results for all four courses combined show the on-campus cohort, 2.9% (n=10) failed a course during the last three years that the MSN program was offered on-campus. In contrast, 1.8% (n=27) of the online cohort failed a course during the first three years that the program was transitioned online. The on-campus cohort had a pass rate of 97.1% (n=350), while the online cohort had a pass rate of 98.2% (n=1438). Overall, there was 2% (n=37) of MSN students among both cohorts who failed a course, and 98%

(n=1778) who passed a course. The data sample included n=1815 MSN students. Comparatively, there were 97.1% of on-campus MSN students who passed their courses while 98.2% of online MSN students who passed their courses. As a result, most students in each cohort were academically successful because they passed their courses.

Each course was also analyzed separately using the analysis method described above. NSC 840: Nursing Theory used a Fisher's Exact Test because zero students failed the course (0<5). The results show the on-campus cohort had a 0% (n=0) fail rate. In contrast, there were 2.7% (n=12) online students who failed the course. On campus students had a pass rate of 100% (n=93) while online students had a pass rate of 97.3% (n=445).

Both cohorts combined earned a fail rate of 2.2% (n=12) and a pass rate of 97.8% (n=538) in NSC 840. Because the Fisher's Exact Test resulted in a P-value equal to .236, and the rate of significance is (.05), the test results are concluded to be non-significant and does not support that the online students in NSC 840 outperformed the on-campus student cohort.

In NSC 842: Advanced Nursing Practice Issues, a Fisher's Exact test was used because only three students in each of the delivery modes failed the course (3<5). The on-campus cohort had a 3.2% (n=3) fail rate. In contrast, there were 1.3% (n=3) online students who failed the course. On campus students had a pass rate of 96.8% (n=91) while online students had a pass rate of 98.7% (n=233).

Overall, both cohorts combined earned a fail rate of 1.8% (n=6) and a pass rate of 98.2% (n=330) in NSC 842. Because the Fisher's Exact Test resulted in a P-value equal to .358, and the rate of significance is (.05), the test results are concluded to be non-

significant and does not support that the online students in NSC 842 outperformed the on-campus student cohort.

In NSC 890: Research in Rural Nursing, the Pearson Chi Square test was used as the primary method of analysis. The on-campus cohort had a 7.8% (n=7) fail rate. In contrast, there were 2.1% (n=9) online students who failed the course. On campus students had a pass rate of 92.2% (n=83) while online students had a pass rate of 97.9% (n=425).

Overall, both cohorts combined earned a fail rate of 3.1% (n=16) and a pass rate of 96.9% (n=508) in NSC 892. Because the Pearson's Chi Square Test resulted in a P-value equal to .004, and the rate of significance is (.05), the test results are significant. This suggests that there is sufficient evidence to support that online students taking NSC 890 perform at a higher academic level than the on-campus student cohort. It is important to note that the effect size, accounting for only .1%, is considered small.

In NSC 892, Research Project, a Fisher's Exact test was used because zero on-campus students failed the course and only three online students failed the course (0<5 & 3<5). The on-campus cohort had a 0% (n=0) fail rate. In contrast, there were 0.9% (n=3) online students who failed the course. On campus students had a pass rate of 100% (n=73) while online students had a pass rate of 99.1% (n=347).

Overall, the combined cohorts earned a fail rate of 0.7% (n=3) and a pass rate of 99.3% (n=423) in NSC 892. Because the Fisher's Exact Test resulted in a P-value equal to 1, and the rate of significance is (.05), the test results are concluded to be non-significant and does not support that the online students in NSC 892 outperformed the on-campus student cohort.

Implications for Policy and Practice

The use of online learning in the university setting will only continue to grow before it levels off. In fact, five states within the United States require high school students to have completed at least one online course prior to graduation (Watson et al., 2012). Even at the high school level, education administrators understand the need to prepare its' graduates to expect to take an online course at the college level. For this reason, effective program evaluation is necessary to continue to explore student and faculty needs. To do so would mean addressing online student retention, effective preparedness to an online degree program, and ongoing faculty professional development.

Online student retention is a sizeable issue in the online learning community. According to Fetzner, (2013), online programs have a lower retention rate compared to the traditional on-campus student retention rates. Although there are numerous online programs that have higher retention rates than on-campus programs, in general, the retention rates among online students are lower. Lower retention directly affects student success if the student is not completing their online courses and earning a college degree. To address this, the common social stigma and message that online courses are "easier" than on-campus courses needs to be conveyed in a thorough manner to new online students. This can be accomplished by effective admissions advising as well as allowing prospective online students to enter a sample online course, prior to applying to an online degree program, to decide if they are prepared to commit to completing it.

Future Research

This study contributes to the growing academic research on the subject of online learning by comparing how successful online graduate nursing students can be compared to how they once were in the on-campus traditional lecture setting. Online learning is not a brand new mode of course delivery, however, it has not been utilized for as many decades as on-campus learning. For this reason, any study contributing to the overall knowledge base of using online learning in higher education is positive.

Additional research that could be performed in the future should include variables that affect online student performance. These variables include whether or not the student is working full time because their time commitment would be potentially more limiting than an online student who was not working full time.

Future studies could also include the use of all courses in a MSN degree program for analysis in the manner that was used in this study. Additionally, it would be beneficial if a future study included the dropout rate in an online graduate nursing program and compare it to the dropout rate of on-campus learners in the same program. This would provide academia with the knowledge of whether online student retention is better or worse than the retention rates when the program was only offered on-campus.

Because this study focuses specifically on graduate nursing students in an MSN program, future research relating to the nursing profession outcomes could be conducted. Examples of this include a comparison of an on-campus cohort vs. an online cohort to determine how both types of graduates apply their knowledge gained in the program to practice in a clinical setting. Additionally, a study could be performed to determine if

there is a difference in whether an on-campus graduate or online graduate are hired post-graduation at a different rate.

Graduates from MSN programs that require board certification to practice as a Nurse Practitioner can also be analyzed in a future study. This can be done by comparing whether a variance exists when analyzing on-campus graduate and online graduate post-graduation board exam pass rates.

Student feedback is also a positive way to determine perceived attitudes and identify suggestions for both on-campus and online learning. In the future, a qualitative study could be performed to consider student perspectives related to both course delivery methods.

Although this study focused on an online MSN program, a similar study could do the same type of analysis on other online graduate and undergraduate programs who were also once taught 100% on campus and then transitioned to an online learning delivery mode. From there, a comparison could be done to analyze which programs yielded higher successful students through an online delivery mode. Furthermore, graduation rates could be analyzed to determine which delivery mode produced a higher number of graduates and in the case of an MSN program, how many of those graduates successfully passed their national certifying board exam post-graduation?

Conclusion

The results of this study show both cohorts of course delivery modes yielding academically successful MSN students. The literature suggests that effective online delivery of courses involves attention to many of the variances included within

understanding the barriers faced by online students as well as quality program evaluation. Based on the results of this study, online students are performing almost nearly as well as the on-campus students in the program once did. Each course is different and yielded different results, but it can be concluded that both course delivery modes are providing the MSN program with almost equal and stellar pass rates by the students taking their required core courses.

Other online degree programs at Eastern Kentucky University and similar universities may consider conducting a case study on the effectiveness of the student support resources, faculty professional development, and administrative processes utilized within the MSN online degree program. In doing so, other online degree programs can replicate many of the practices contributing to the high rate of academic success among their online students to facilitate their desire to ensure their program mirrors the same outcomes.

Online learning is an ever-evolving learning environment for educators and learners in higher education. Uncertainty related to educational outcomes within the realm of distance learning should continually be explored to ensure the needs of educators and learners are met and the mission of each institution of higher education using distance learning is maintained. This study provides data supporting the use of distance learning in Master of Science (MSN) programs in universities within the United States. With strategic use of program evaluation and student support services, among many other factors, it is possible for a MSN program to offer its curriculum in an online learning setting to MSN graduate students and expect similar academic outcomes as MSN graduate students taking classes in a tradition in-class setting. Furthermore, the

study provides support that other online degree programs could expect similar results if utilizing similar structure, faculty and students services, and evaluation.

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